BURNS CREEK DAM AND POWERPLANT, UPPER SNAKE RIVER, IDAHO

UNIVERSITY
OF MICHIGAN

JUL 2 1957

MAIN
READING ROOM

HEARING

BEFORE THE

SUBCOMMITTEE ON IRRIGATION AND RECLAMATION

OF THE

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

EIGHTY-FIFTH CONGRESS

FIRST SESSION

ON

S. 145 and S. 2089

BILLS TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO CONSTRUCT, OPERATE, AND MAINTAIN A REREGULATING RESERVOIR AND OTHER WORKS AT THE BURNS CREEK SITE IN THE UPPER SNAKE RIVER VALLEY, IDAHO, AND FOR OTHER PURPOSES

MAY 22, 1957

Printed for the use of the Committee on Interior and Insular Affairs

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BURNS CREEK DAM AND POWERPLANT, UPPER SNAKE RIVER, IDAHO

WEDNESDAY, MAY 22, 1957

UNITED STATES SENATE,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D. C.

The subcommittee met at 10 a. m., pursuant to notice, in room 224, Senate Office Building, Hon. Clinton P. Anderson (chairman of the subcommittee) presiding.

Present: Senators Anderson, Church, Malone, Watkins, and Dworshak.

Present also: Goodrich W. Lineweaver, committee assistant for reclamation, Elmer K. Nelson, professional staff member, E. D. Eaton, consultant.

Senator ANDERSON. The subcommittee will be in order.

At this point, without objection, I will place into the record a copy of S. 145, by Senator Dworshak, and S. 2089, proposed by Senator Church, to authorize the Burns Creek Dam Powerplant in the Upper Snake River of Idaho, and department reports thereon.

(The bills and reports referred to follow:)

[S. 145, 85th Cong., 1st Sess.]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain a reregulating reservoir and other works at the Burns Creek site in the Upper Snake River Valley, Idaho, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to assist in the irrigation of arid and semiarid lands in the Upper Snake River Valley, Idaho, to provide facilities for river regulation and the control of floods, to utilize the hydroelectric power opportunities created thereby, and, as incidents to the foregoing purposes, to enhance recreational opportunities and provide for the preservation and propagation of fish and wildlife, the Secretary of the Interior is authorized to construct, operate, and maintain a reregulating reservoir, powerplant, and related facilities at or near Burns Creek site below Palisades Dam on the Snake River. In so doing, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof and supplementary thereto). The works herein authorized shall be considered as features of the Palisades Dam and Reservoir project (Act of September 30, 1950, 64 Stat. 1083) and shall be integrated therewith financially and operationally.

SEC. 2. The irrigation storage space in Burns Creek Reservoir shall be reserved for subscription by organizations which have storage rights in Palisades Reservoir, and the Secretary may contract with any such organization on the basis of operating plans which, in accordance with contracts heretofore entered into between the United States and subscribers to Palisades space, treat said conservation capacity as having a priority equal to that of the irrigation capacity in Palisades Reservoir. Any Burns Creek irrigation storage space which is not so subscribed within six months from the time when funds are first made available for starting construction of the Burns Creek development shall then be made available for use in accordance with the Federal reclamation laws.

SEC. 3. (a) The Secretary is authorized, in connection with the Burns Creek development, to construct minimum basic public recreational facilities and to

arrange for the operation and maintenance of the same by an appropriate State or local organization or agency.

(b) The Secretary may make such reasonable provision in the works of the Burns Creek development as, upon further study in accordance with section 2 of the Act of August 14, 1946 (60 Stat. 1080, 16 U. S. C., sec. 662), he finds to be required for the preservation and propagation of fish and wildlife. An appropriate portion of the cost of the development shall be allocated as provided in said Act and it, together with the portion of the construction cost allocated to recreation and the operation and maintenance costs allocated to these functions, shall be nonreimbursable and nonreturnable under the reclamation laws.

(c) So far as the Secretary finds the same to be consistent with safety and with efficient operation for the primary purposes of the development, Burns Creek Reservoir and lands adjacent thereto which are owned by the United States shall be open to free public use for lawful hunting and fishing purposes, and free access thereto for those purposes shall be assured.

(d) During times when releases for other purposes are less than one thousand cubic feet per second, a release of this amount from Burns Creek Reservoir shall nevertheless be maintained for the benefit of downstream fishlife, but this release may be reduced for brief temporary periods by the Secretary whenever he may find that maintenance thereof is harmful to the primary purposes of the project.

SEC. 4. To assist in the construction of the works authorized by section 1 of this Act, the Secretary may, notwithstanding the last sentence of section 2 of the Act of September 30, 1950 (64 Stat. 1083), construct all necessary facilities to deliver power to the site of said works. The power-generating and transmission facilities authorized to be constructed by section 1 of this Act shall be subject to the second sentence of section 2 of said Act of September 30, 1950, and shall, to the greatest possible extent consistent with existing contractual obligations, be operated in conjunction with and connected to the facilities covered by such second sentence to the end of producing and marketing the greatest amount of power and energy. Nothing contained in this Act shall be construed to affect adversely the application in aid of irrigation, under sections 2 (b), 3 (a), and 5 of the Act of August 31, 1954 (68 Stat. 1026), of net power revenues received from the Palisades Reservoir and developments combined therewith for payout purposes under said Act of September 30, 1950.

SEC. 5. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act.

DEPARTMENT OF THE ARMY,
Washington 25, D. C., May 1, 1957.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
United States Senate.

DEAR MR. CHAIRMAN: Reference is made to your request for the views of the Department of the Army with respect to S. 145, 85th Congress, a bill to authorize the Secretary of the Interior to construct, operate, and maintain a reregulating reservoir and other works at the Burns Creek site in the Upper Snake River Valley, Idaho, and for other purposes.

The Department of the Army has considered the above-mentioned bill. The purpose of the bill is to authorize the Secretary of the Interior to construct and operate a reregulating reservoir, powerplant, and related facilities at or near the Burns Creek site below Palisades Dam on the Snake River, Idaho.

There is no apparent conflict between the proposed Burns Creek project and existing projects or plans of the Corps of Engineers in the Upper Snake River Basin. Accordingly, the Department of the Army has no objection to the enactment of S. 145.

The Bureau of the Budget advises that there is no objection to the submission of this report.

Sincerely yours,

WILBER M. BRUCKER,
Secretary of the Army.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington 25, D. C., April 29, 1957.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington 25, D. C.

MY DEAR MR. CHAIRMAN: Further reference is made to your letter of January 14, 1957, requesting the comments of the Bureau of the Budget on S. 145, a bill to authorize the Secretary of the Interior to construct, operate, and maintain a reregulating reservoir and other works at the Burns Creek site in the Upper Snake River Valley, Idaho, and for other purposes.

Our previous letter of January 23, 1957, recommended that the committee defer action on this bill until a project report had been received. The Department of the Interior's final report was transmitted to the Bureau of the Budget on February 26, 1957, and our review has been completed.

S. 145, if enacted, would authorize the Secretary of the Interior to construct, operate, and maintain the Burns Creek Dam, Reservoir, and powerplant, which would be located on the Snake River in Bonneville County, Idaho, about 30 miles downstream from Palisades Dam. The proposed development would provide reregulation of water releases from Palisades Reservoir, at-site power production with an installed capacity of 90,000 kilowatts, and irrigation holdover storage of 100,000 acre-feet. It would be integrated operationally and financially with the Palisades project.

Based on January 1956 prices, the total cost of the Burns Creek project was estimated at $40,310,000, with tentative cost allocations of $827,000 to irrigation, $39,440,000 to power, and $43,000 to recreation. The benefit-cost ratio is stated to be 1.26 based on a 50-year period of analysis. However, the Department's most recent estimates, based on January 1957 prices, indicate the project will cost about about $44,200,000 exclusive of fish and wildlife facilities and recreation facilities, and that the irrigators will be able to repay, over a 40-year period, $775,000 of the allocation to irrigation. Anticipated power revenues are estimated by the Department to be sufficient to meet annual operation costs, repay with interest the total allocation to commercial power, and repay the balance of the irrigation allocation in less than 50 years of integrated operation with the Palisades powerplant.

S. 145 would also authorize the Secretary of the Interior to construct minimum basic public recreational facilities and to make provisions for the preservation and propagation of fish and wildlife. The bill further provides that an appropriate portion of the cost of the development shall be allocated nonreimbursably to the preservation and propagation of fish and wildlife, together with the costs allocated to recreational facilities, and the operation and maintenance costs allocated to these functions. The Bureau of the Budget believes that the costs of providing minimum basic recreational facilities should be treated as part of the overall project cost and allocated to the basic purposes of the improvement. We also believe the costs of preventing damages to existing fish and wildlife resources should be allocated to the basic purposes of the project and that costs attributable to enhancement of fish and wildlife should not be borne in their entirety by the Federal Government unless the resource is found to be of national importance.

The Department of the Interior, in a report which the Secretary proposes to submit to the committee, recommends three amendments to S. 145. The first proposed amendment would eliminate the requirement respecting land classification and soil survey on the basis that the additional irrigation water provided by storage in the Burns Creek Reservoir would be used as a supplemental supply to lands already being served by the Palisades project. The other amendments recommended by the Department would permit a transfer of the recreational facilities to the Forest Service and clarify a possible ambiguity. The Bureau of the Budget concurs in these proposed amendments.

Subject to your consideration of our comments on recreation and fish and wildlife and if amended as proposed by the Department of the Interior, there would be no objection to enactment of this measure.

Sincerely yours,

ROBERT E. MERRIAM,
Assistant Director.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., May 7, 1957.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington 25, D. C.

DEAR SENATOR MURRAY: A report from this Department has been requested on S. 145, a bill to authorize the Secretary of the Interior to construct, operate, and maintain a reregulating reservoir and other works at the Burns Creek site in the Upper Snake River Valley, Idaho, and for other purposes.

We recommend that the bill be enacted. Three minor amendments set out hereafter are also recommended.

The Burns Creek Dam, Reservoir, and powerplant would be located on the Snake River in Bonneville County, Idaho, about 30 miles downstream from Palisades Dam. It would be integrated electrically, hydraulically, and financially with the existing Palisades reclamation project. Our planning report on this development, together with copies of the comments we have received from State and Federal agencies, has been transmitted to the President of the Senate and referred to your committee.

The prime purpose of the Burns Creek development is reregulation of releases from Palisades. In addition, 100,000 acre-feet of its 234,000 acre-feet of reservoir capacity will be available for long-term holdover irrigation storage purposes and a 90,000-kilowatt powerplant is proposed. The reregulation of Palisades releases will result in more efficient use of Palisades than is possible otherwise. Without downstream regulation, for instance, the operation of Palisades powerplant would be limited by restrictions on streamflow fluctuations below the dam. The integrated or combined operation of Burns Creek and Palisades will permit the prime power output from the Palisades powerplant alone to be more than doubled.

The 100,000 acre-feet of irrigation storage will be utilized principally as long-term holdover storage. It will, in effect, provide insurance water to be used during such periods of extreme drought as occurred during the early 1930's. It is expected that it will be contracted for, and used on the same lands (650,000 irrigated acres along the Snake River extending in a strip upstream from Bliss, Idaho) as the Palisades irrigation water. In view of this, it seems to us that the requirement of the Interior Department Appropriation Act, 1954 (67 Stat. 261, 266, 43 U. S. C., sec. 390a) respecting land classification and soil survey could well be waived and we so recommend. To carry out this recommendation, we suggest that there be inserted in the bill a new section 5 (the present sec. 5 being renumbered accordingly) reading as follows:

"Expenditures for the works authorized by section 1 of this Act may be made without regard to the soil survey and land classification proviso of the Interior Department Appropriation Act, 1954 (67 Stat. 261, 266, 43 U. S. C., sec. 390a)."

The bill provides a 6-month preference to holders of storage rights in Palisades Reservoir for subscription to Burns Creek space. It also provides that "the Secretary may contract with any such organization on the basis of operating plans which, in accordance with contracts heretofore entered into between the United States and subscribers to Palisades space, treat said conservation capacity as having a priority equal to that of the irrigation capacity in Palisades Reservoir." Typical of the contract provisions to which this passage refers is that in article 29 (c) of the contract of January 7, 1955, with the Milner Low Lift Irrigation District:

"If the United States, under the Federal reclamation laws, hereafter constructs storage facilities on the Snake River or its tributaries above Milner Dam in addition to those now constructed or authorized to be constructed to provide water for irrigation purposes, the district hereby agrees that, notwithstanding the establishment of a storage right for such additional facilities with a priority subsequent to that assigned the Palisades Dam and Reservoir, the United States may hereafter contract with water users organizations which then have storage rights in Palisades Reservoir, to operate not to exceed 300,000 acre-feet of such capacity for the storage of water for irrigation for the benefit of such organizations as though that capacity had a storage right of identical priority with that held for Palisades Dam and Reservoir."

On the basis of present cost estimates, it is likely that construction charges for the use of Palisades space will be $7.75 per acre-foot. It is tentatively proposed that Burns Creek space be charged for at the same rate. On this basis, the total repayment by the water users for the use of 100,000 acre-feet of Burns Creek storage would be $775,000, repayable over a 40-year period. The remainder of the irrigation allocation can readily be returned from net power revenues.

The total estimated cost of constructing the Burns Creek development, exclusive of fish and wildlife facilities and recreation facilities, is about $44,200,000 on the basis of January 1957 prices. It is estimated that, combined with Palisades as the bill provides, the reimbursable costs of the two projects would be returned in less than 50 years after full operation of the Burns Creek powerplant begins.

Economic analysis of the Burns Creek development on the basis of January 1956 costs indicated that its primary benefits alone exceed total costs in the ratios of 1.48 to 1.0 and 1.26 to 1.0 based on periods of analysis of 100 and 50 years, respectively. While the increased costs shown by January 1957 indices will change these ratios somewhat, they are still favorable to construction of the project.

We recommend that the bill be amended by adding the word "Federal," at the end of line 3, page 3, and by substituting "in connection with" for the words "in the works of" in line 6, page 3. The first of these changes is suggested in order that a possible turnover of the recreation facilities to the Forest Service shall not be precluded, the second to clarify a possible ambiguity.

A statement of personnel and other requirements that enactment of S. 145 may entail is attached in accordance with the provisions of Public Law 801, 84th Congress.

The Bureau of the Budget has advised that there would be no objection to the submission of this report to your committee.

Sincerely yours,

FRED G. AANDAHL,
Assistant Secretary of the Interior.

[S. 2089, 85th Cong., 1st sess.]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain a reregulating reservoir and other works at the Burns Creek site in the Upper Snake River Valley, Idaho, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to assist in the irrigation of arid and semiarid lands in the Upper Snake River Valley, Idaho, to provide facilities for river regulation and the control of floods, to utilize the hydroelectric power opportunities created thereby, and, as incidents to the foregoing purposes, to enhance recreational opportunities and provide for the preservation and propagation of fish and wildlife, the Secretary of the Interior is authorized to construct, operate, and maintain a reregulating reservoir, powerplant, and related facilities at or near the Burns Creek site below Palisades Dam on the Snake River, the reservoir and powerplant to be substantially in accordance with the report of the Secretary of the Interior entitled "Burns Creek Dam, Powerplant and Reservoir" dated March 1956. In so doing, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof and supplementary thereto). The reservoir, powerplant and related facilities herein authorized shall be considered as features of the Palisades Dam and Reservoir project (Act of September 30, 1950, 64 Stat. 1083) and, after separate allocations of costs, shall be integrated therewith financially and operationally.

SEC. 2. The irrigation storage capacity in Burns Creek Reservoir shall be reserved for subscription by entities which have allocations of storage capacity in Palisades Reservoir, whether or not under contract before the date of this Act. And the Secretary may contract with any such entity on the basis of operating plans which, in accordance with contracts heretofore entered into between the United States and subscribers to Palisades capacity, treat the conservation capacity in Burns Creek Reservoir of equal priority for irrigation to that of the irrigation capacity in Palisades Reservoir. Any Burns Creek irrigation capacity which is not so subscribed within six months from the time when funds are first made available for starting construction of the Burns Creek development shall then be made available for use without the benefit of such equal priority.

SEC. 3. (a) The Secretary is authorized, in connection with the Burns Creek development, to construct through agencies of the Department of the Interior or the Department of Agriculture minimum basic public recreational facilities, and to arrange for the operation and maintenance thereof by an appropriate Federal agency, or by an appropriate State or local body should the Governor of Idaho so choose.

(b) The Secretary may make such reasonable provision in connection with the works of the Burns Creek development as, upon further study in accordance with

section 2 of the Act of August 14, 1946 (60 Stat. 1080, 16 U. S. C. 662), he finds to be required for the preservation and propagation of fish and wildlife. An appropriate portion of the cost of the development shall be allocated as provided in said Act and it, together with the portion of the construction cost allocated to recreation and the operation and maintenance costs allocated to these functions, shall be nonreimbursable and nonreturnable under the reclamation laws.

(c) So far as the Secretary finds the same to be consistent with safety and with efficient operation for the primary purposes of the development, Burns Creek Reservoir and lands adjacent thereto that are reserved or acquired by the United States for the works herein authorized shall be opened to free public use for lawful hunting and fishing purposes and free access thereto for those purposes shall be assured.

(d) During times when releases for other purposes are less than one thousand cubic feet per second, a release of this amount from Burns Creek Reservoir shall nevertheless be maintained for the benefit of downstream fishlife, but this release may be reduced for brief temporary periods by the Secretary whenever he may find that maintenance thereof is harmful to the primary purposes of the project.

SEC. 4. (a) To assist in the construction of the works authorized by section 1 of this Act, the Secretary may, notwithstanding the last sentence of section 2 of the Act of September 30, 1950 (64 Stat. 1083), construct all necessary facilities to deliver power to the site of said works. The power-generating and transmission facilities authorized to be constructed by section 1 of this Act shall be subject to the second sentence of section 2 of said Act of September 30, 1950, and shall, to the greatest possible extent consistent with existing contractual obligations, be operated in conjunction with and connected to the facilities covered by such second sentence to the end of producing and marketing the greatest amount of power and energy. Nothing contained in this Act shall be construed to affect adversely the application in aid of irrigation, under sections 2 (b), 3 (a), and 5 of the Act of August 31, 1954 (68 Stat. 1026), of net power revenues received from the Palisades Reservoir and developments combined therewith for payout purposes under said Act of September 30, 1950.

(b) The Secretary is authorized to amend contracts heretofore made under the Acts of September 30, 1950, supra, and of August 31, 1954, supra, whereby the water users assumed an obligation for winter power replacement based on the winter water savings program at the Minidoka powerplant to relieve the contractors ratably by one-third of their annual obligation, and to make new contracts under these Acts on a like basis. To the extent such annual obligations are reduced, the cost thereof shall be included in the costs to be absorbed by the power operations of the Palisades project.

(c) The actual construction of the facilities herein authorized shall not be undertaken until at least 80 per centum of the conservation capacity in Burns Creek Reservoir is under subscription nor until arrangements have been completed in accordance with the provisions of (b) of this section.

SEC. 5. Expenditures for the works authorized by section 1 of this Act may be made without regard to the soil survey and land classification proviso of the Interior Department Appropriation Act, 1954 (67 Stat. 261, 266, 43 U. S. C. 390a).

SEC. 6. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington 25, D. C., May 22, 1957.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
United States Senate, Washington 25, D. C.

DEAR SENATOR MURRAY: Your letter of May 16 and a followup telephone call asked that we consider, in connection with our report of May 7 on S. 145, the differences between that bill and S. 2089 which was introduced on May 15.

The principal differences in the two bills are these:

(1) S. 2089 includes a specific reference (p. 2, lines 6 and 7) to this Department's planning report on the Burns Creek development. This change adds nothing to S. 145 but we do not object to it. We suggest, however, that the date "March 1956" which appears in line 7, page 2, be corrected to read "February 26, 1957."

(2) S. 2089 also includes (p. 2, lines 13 and 14) the phrase "after separate allocations of costs" which does not appear in S. 145. This change likewise seems to add nothing to S. 145 but appears to be unobjectionable.

(3) Section 2 of S. 2089 follows fairly closely the corresponding section in S. 145 but uses the word "entities" where "organizations" appears in S. 145, uses the expression "allocations of storage capacity in Palisades Reservoir" in S. 2089 where "storage rights in Palisades Reservoir" appears in S. 145, adds the phrase "whether or not under contract before the date of this act" in line 19, page 2, and adds "without the benefit of such equal priority" in lines 4 and 5, page 3.

The last 2 of these 4 differences are not objectionable. In the other two respects, however, the language of S. 145 is distinctly preferable to that of S. 2089 since it is more closely geared to the language of existing Palisades contracts (as exemplified by the quotation on p. 2 of our report on S. 145) than is that of S. 2089. We therefore recommend that the text of this section as found in S. 145, with or without the last 2 changes pointed out above, be the 1 enacted.

(4) Section 3 (a) of S. 2089, dealing with construction of basic recreation facilities, adds "through agencies of the Department of the Interior or the Department of Agriculture" to the language of S. 145. The addition is unnecessary and may, perhaps, be objectionable because of the implication that the Secretary of the Interior could utilize the services of subordinate agencies of the Department of Agriculture without the consent of the head of that Department. Since appropriate arrangements can be made with agriculture under the act of May 21, 1920, as amended (31 U. S. C., sec. 686), we suggest that this language be not adopted.

(5) There is also added to this subsection in S. 2089 (p. 3, lines 12 and 13) language the purpose of which is not clear but which might have the effect of restricting the transfer of operation and maintenance of the recreation facilities to a State or local body unless the Governor of Idaho so chooses. While there would be no objection to this restriction in the case of State bodies that are responsible to the Governor, it seems unwise and uncalled for if the transfer is to be made to a local body or organization. Our recommendation, therefore, is that the language of S. 145, amended as suggested in our report on that bill, be retained.

(6) Section 4 of S. 2089 includes two new subsections that were not contained in S. 145. The first, subsection (b), relates to a reduction in certain obligations undertaken by irrigation interests which serve to compensate the beneficiaries of the Minidoka powerplant for losses of power resulting from storage in Palisades. The recency of receipt of your request for comments on S. 2089 has not given sufficiency of time to analyze the implications of this subsection or its merits. In view, however, of its being merely an authorization, we would not object to its inclusion in the bill on the understanding that this is not a commitment on our part to do more than to examine and weight the merits of the proposal and to exercise the authority which enactment of this subsection would grant us if it is found to be meritorious. In order to clarify the subsection, however, we suggest that (if your committee decides to recommend its enactment at all) there be substituted the phrase "to the extent of not more than one-third of said obligation" for the words "ratably by one-third of their annual obligation" in lines 16 and 17 on page 5 of S. 2089.

(7) Subsection (c) of the same section in S. 2089 would, if enacted, provide that construction of Burns Creek shall not be commenced until 80 percent of its conservation capacity has been subscribed and until arrangements in accordance with the preceding subsection have been completed. We recommend that subsection (c) be not enacted. We do so for two reasons: First, while it is ordinarily desirable not to construct facilities the success of which depends on water user repayments until repayment contracts have been entered into, it is power returns that will carry the great bulk of the cost of Burns Creek. A requirement of 80 percent subscription of the conservation capacity of the reservoir is therefore irrelevant to the success of the undertaking. Secondly, as has already been indicated, we have not had an adequate opportunity to evaluate the merits of subsection (b) and cannot, therefore, recommend that it be reinforced and implemented in the manner proposed in subsection (c).

(8) S. 2089 includes a section 5 which does not appear in S. 145. Inclusion of such a subsection has already been recommended by us in connection with S. 145.

The Bureau of the Budget has advised that there would be no objection to the submission of this report to your committee. It concurs in the amendments recommended in our report and, with respect to other matters covered in S. 2089, invites attention to the views expressed by it in its report on S. 145.

Sincerely yours,

HATFIELD CHILSON,
Under Secretary of the Interior.

Senator ANDERSON. The first witness is Mr. Harold Nelson of the Bureau of Reclamation, accompanied by Mr. Nielson and Mr. Martz.

STATEMENT OF HAROLD T. NELSON, REGIONAL DIRECTOR, BUREAU OF RECLAMATION, BOISE, IDAHO; ACCOMPANIED BY EDWARD G. NIELSON, ASSISTANT COMMISSIONER, BUREAU OF RECLAMATION, AND MERRILL MARTZ, SUPERVISOR OF POWER, BUREAU OF RECLAMATION, BOISE, IDAHO

Mr. NELSON. Mr. Chairman, and members of the committee: My name is Harold T. Nelson. I am a regional director of the Bureau of Reclamation, located in Boise, Idaho.

It is a pleasure to appear here on behalf of the proposed Burns Creek Development. The Burns Creek Dam, Reservoir and powerplant would be located on Snake River, in Bonneville County, about 38 miles east of Idaho Falls. I have a map at the rear of the room that illustrates the entire Snake River Basin, and will show also the location of the existing developments on the river as well as the relationship of the proposed Burns Creek Dam and powerplant thereto.

I want to explain the key, which is that the green shaded areas are already irrigated and the yellow areas are lands susceptible of further irrigation development. The various reservoirs are shaded in blue.

The Burns Creek development is shaded in a cross-hatched blue.

The site of Burns Creek Dam and Reservoir is immediately below Palisades Dam and Reservoir which is now nearing completion. In fact, the Palisades Storage Reservoir and powerplant is about 8 miles above the flow line of Burns Creek Reservoir.

Burns Creek Dam and Reservoir as proposed, is a multiple purpose development with a primary purpose, however, of re-regulating releases from Palisades Reservoir. This will result in an important increase in peaking power at Palisades Dam and powerplant; also will add at-site power; in addition will add 100,000 acre-feet of holdover storage at Burns Creek site; will provide some 17,000 acre feet of pondage that will be available for daily use; and will provide in addition to that certain minor recreation benefits; and will improve fishery conditions up and down the river.

I should mention at this point that Burns Creek Dam and Reservoir are located immediately above the first of a long series of irrigation diversions that take out of Snake River below that point, so that it is possible, with Burns Creek in the system, to level out releases below that point during the summer irrigation season, and make better use of the very large installed capacity at Palisades Dam and Reservoir.

Next I have just a quick word on the existing developments in that part of the basin. Irrigation started originally in about 1879. The surface flows were completely appropriated for irrigation use by about 1920. It was necessary to start construction earlier than that, however, of a series of major irrigation storage reservoirs.

The first major one was Jackson Lake Dam, which was built in about 1911 and later enlarged. That is upstream from Palisades and upstream from Burns Creek, and, of course, has one of the earliest rights on the river insofar as storage is concerned.

The next major reservoir was built downstream from Burns Creek site, the American Falls Dam and Reservoir, 1,700,000 acre-feet, located at American Falls, Idaho, was completed in 1927.

Neither Jackson nor American Falls have power developments.

There is a total now of about 1,200,000 acres irrigated upstream from Milner Dam, which is the major division point for the Upper Snake River Basin. Milner Dam is below American Falls, Idaho, in the vicinity of Burley, Idaho.

That green area surrounding Burley is the Minidoka project. I want to point out that the Minidoka diversion dam and powerplant was built in about 1906 to 1909. That was the first Federal power development in the entire Pacific Northwest, and was built primarily to provide irrigation pumping energy for the Minidoka and Burley irrigation districts, but resulted in the development of some firm power also. The Bureau has had power marketing relationships with some 15 preference customers and municipalities in that area dating from about that time, about 1909.

Senator CHURCH. May I interrupt at this point, Mr. Nelson, to ask whether or not the preference customers that were served from Minidoka in recent years have not had demands for power that exceeded the capacity of the Minidoka plant?

Is that correct?

Mr. NELSON. That is correct, sir.

Senator CHURCH. Is it not true that in that area now there has been persistent demand from preference customers for more power than the Government is now in a position to supply?

Mr. NELSON. Yes, that is correct.

Senator CHURCH. Thank you.

Senator ANDERSON. Is any of the power going to other than preference customers?

Mr. NELSON. Yes. There is some dump power and certain seasonal energy that is sold to private utilities in the area. We have always had contractual relationships with the Idaho Power Co. and most recently with the Palisades powerplant coming on the line, with the Utah Power & Light Co. for the disposal of dump energy, certain classes of secondary energy, and for certain wheeling services.

But all of the firm power and a certain amount of irrigation seasonal firm is committed by contract to preference customers.

Senator ANDERSON. How much of the power is firm power there?

Mr. NELSON. You are asking in connection with Minidoka Dam now?

Senator ANDERSON. Yes.

Mr. NELSON. Do you have that figure, Mr. Martz?

It is a 13,000 kilowatt plant.

Mr. MARTZ. By virtue of the winter restrictions on releases of water, it produces about 6,000 kilowatts firm in the wintertime, and runs at capacity in the summer. In fact, it is over capacity. It is about 15,000 in the summer. That is the Minidoka plant itself.

Senator ANDERSON. Did you make any effort in these properties to so handle and pool the property that you can take care largely of

your preference customers, or do you allow it to develop a great deal of dump power?

Mr. NELSON. We have integrated the operations of the Minidoka plant with our series of plants on the Boise River, which is located some 140 to 150 miles to the west on the Boise River.

There a series of plants has been built also in connection with irrigation projects. By interconnection through, again, a wheeling arrangement, we have integrated the Boise project and the Minidoka project, and have added to the firm capability; that is, the amount that we have been able to sell as firm power. We have done that; yes, sir.

Senator ANDERSON. What is happening at American Falls? Did you say there was no power there?

Mr. NELSON. The Idaho Power Co. has a powerplant of about 27,000 kilowatts immediately below American Falls Dam, but it is not connected with the dam in any way.

Senator ANDERSON. Why was there not any power put in the dam, into the American Falls Dam?

Mr. NELSON. Originally, of course, the dam was built to provide irrigation storage, and certain water rights were acquired at the time the American Falls Dam was authorized, prior to its being constructed, that would permit storage of water in American Falls. It was necessary to retire from use 2 of the 3 existing private plants at that site.

Power penstocks were put into American Falls Dam in anticipation of a future power development.

In about 1952, when the Palisades project was authorized, which I will discuss a little later, a powerplant was authorized for construction at the American Falls Dam.

Senator ANDERSON. It was authorized in 1952.

Mr. NELSON. Yes, sir.

Senator DWORSHAK. 1950, I believe, Mr. Chairman, September 30.

Senator ANDERSON. When do you expect to see it built?

Mr. NELSON. The American Falls powerplant authorizing legislation contained a limitation of about $6,600,000 for the cost of the 30,000-kilowatt plant. At January 1955 price levels that would come to about $8,900,000. So it will be necessary to get the limitation raised prior to initiating construction.

Senator ANDERSON. Have you requested that?

Mr. NELSON. There have been several fund requests in the past years, which, for one reason or another, were not appropriated.

Senator ANDERSON. By the Bureau of Reclamation, the requests?

Mr. NELSON. Yes, sir.

Senator ANDERSON. When was the last one?

Mr. NELSON. I believe in about 1953. I would have to check that, sir.

Senator ANDERSON. I would appreciate that, if you would. (Verified as being calendar year 1953, fiscal year 1954).

Senator DWORSHAK. Mr. Chairman, might I clear the record at that point?

I would like to ask how the power revenues at the Minidoka plant are allocated.

Mr. NELSON. The costs of the powerplant at American Falls were allocated to irrigation use. That is, the investment was classed as an interest-free investment and the output, which will be largely confined to the irrigation season, because irrigation water releases

would be used through the plant, means that the output would be usable for irrigation pumping.

So in the authorizing act, the output of the proposed American Falls powerplant was intended to be used on the Minidoka northside pumping division and on the Michaud Flats project. Presumably, if and when that plant is built, that would be the disposition of the output from that plant.

Senator ANDERSON. It would be a very logical use for it; would it not?

Mr. NELSON. Yes, sir.

Senator ANDERSON. If it was created by irrigation water, then use it to pump the irrigation water and put it where it is needed. That would be a most ideal arrangement.

Mr. NELSON. Yes, sir.

Senator DWORSHAK. Mr. Nelson, you did not answer my question, I do not believe. My question was: How are the power revenues from Minidoka powerplant allocated?

Mr. NELSON. I am sorry. I misunderstood your question, sir.

The power revenues from the Minidoka powerplant for the first 6 units, units 1 to 6, are allocated to the 2 irrigation districts that underwrote the costs of the plant. The Burley Irrigation District receives the credit for about 96 percent of the net power revenues, and the Minidoka Irrigation District receives credit for the remaining 4 percent. They are applied first on any outstanding construction indebtedness, and, secondly, on operation and maintenance costs. That distribution of net revenue was made in the Fact Finders Act.

Senator ANDERSON. What act?

Mr. NELSON. The Fact Finders Act.

Mr. LINEWEAVER. That is 1926.

Senator CHURCH. Was this Minidoka Dam, Mr. Nelson, one of the first dams to utilize power for the purpose of assisting in an irrigation development?

Mr. NELSON. It was the first in the Northwest. I think there may have been 1 or 2 earlier ones in the 17 Western States. Possibly Salt River and possibly one in Utah, but it was the earliest one in the Northwest, that is correct, sir.

Senator CHURCH. Thank you.

Mr. NELSON. Going on with a little historical background, it is necessary, then, in operating Snake River, to consider first and foremost the very complex water-right situation and requirements for irrigation use.

The water users have set up, because of the complex nature of that water-right problem, an advisory group known as the Committee of Nine.

The legal entity that represents the canal companies and irrigation districts is known as water district No. 36. A water master, elected by the water users, who is also a State reclamation engineer representative, administers the various water rights and releases.

His name is Mr. Lynn Crandall.

The last point I want to make before hurrying on is that the next major multiple-purpose storage reservoir, after the American Falls, was the Palisades Dam and Reservoir, which was authorized in 1950. It has a storage capacity of 1,200,000 acre-feet, and a powerplant of 114,000 kilowatts and is now nearing completion.

The first two power units are now on the line.

I would like to point out that the output of the Palisades plant was all contracted for before construction was started.

The irrigation storage in Palisades was oversubscribed by 300,000 acre-feet. The proposed Burns Creek development will add an additional 100,000 acre-feet of holdover storage.

Senator ANDERSON. How much would the American Falls construction add, if you made use of those facilities for which there has been some provision, $6 million authorized already? How many kilowatts would that add?

Mr. NELSON. Due to limitations on water releases below that point, we have estimated that there would be about 4,000 kilowatts of firm, and the rest would be seasonal irrigation energy.

Senator ANDERSON. Seasonal is what you need, so how much would it provide during the summertime? Never mind all year round.

Mr. NELSON. The installed capacity would be 30,000 kilowatts.

Senator ANDERSON. In view of the fact that you say you have not done anything with this since the $6 million is not enough, I assume there would be no objection to adding an amendment to this bill to increase your authorization up to what you need, 8 or 9 million dollars. Do you agree with that?

Mr. NELSON. No objection.

Senator ANDERSON. No objection. Thank you.

If we are going to try to solve the problem out there, you may as well make use of all the weapons you have to help get this power.

Would you submit the necessary estimate and amendment that would be necessary to bring the authorization up to a proper level so that the American Falls Dam can be fully utilized and the seasonal power available for that seasonal task of irrigation?

Mr. NELSON. Yes, sir.

(The matter referred to is as follows:

The object desired could be accomplished by adding a new section to either S. 145 or S. 2089 reading along these lines:

"SEC. —. Section 5 of the Act of September 30, 1950 (64 Stat. 1083) is hereby amended by adding thereto a new sentence reading as follows: 'The appropriations herein authorized to be made shall be subject to increase or decrease to reflect changes, if any, that may occur in the costs of the types of construction involved as shown by engineering indexes.' This amendment shall be effective as of September 30, 1950."

Senator ANDERSON. Do you have to have any special language to protect the irrigators so that they can get this summer dump power or seasonal power, and to prevent it from being sold to somebody else? You are obviously doing this to help the irrigators.

Mr. NELSON. I would say, no, sir; because the costs are allocated to irrigation and are interest free, that is the way we would have to dispose of the energy.

Senator ANDERSON. That is a very attractive setup.

Senator CHURCH. I was going to ask: As far as the power facilities or the generators at the American Falls Reservoir are concerned, they are already authorized by existing legislation; is that correct?

Mr. NELSON. That is correct, sir.

Senator CHURCH. So the only limitation that is now applicable is the limitation on money?

Mr. NELSON. That is correct.

Senator CHURCH. If that were increased, then the authorizing legislation is already in shape and is a part of the original Palisades bill; is that correct?

Senator ANDERSON. Palisades? American Falls.

Senator CHURCH. But I mean the American Falls authorization for generating facilities is a part of the Palisades bill. That is my understanding.

Mr. NELSON. That is correct. It was a part of that bill.

Senator ANDERSON. As I understood it, you so constructed the American Falls Dam, that part of the work has already been done for the creation of power, the necessary concrete footings and so forth are in, or whatever it takes.

Mr. NELSON. No, sir. There are not concrete footings. The penstocks were built into the dam.

Senator ANDERSON. All right. A good deal, at least, of the preliminary work has been done?

Mr. NELSON. No, sir. I would say that just the penstocks, which come to about $75,000. I believe that was the investment in penstocks. Somewhere in that neighborhood.

Mr. LINEWEAVER. But the dam is there?

Mr. NELSON. The dam is there; yes, sir.

Senator ANDERSON. Do you think it is desirable to add the current, make it available to the farmers and others who need current and who are crying for it? Your testimony was awhile ago that you are not able to take care of the preference customers.

Mr. NELSON. The preference customers' major requirement, however, is for firm energy.

Senator ANDERSON. I understand that. But in addition, you have farmers that need the current, apparently, irrigators?

Mr. NELSON. That is correct.

Senator DWORSHAK. Mr. Nelson, you mentioned that this proposed dam at American Falls would be constructed on the basis of interest-free financing. If preference customers and private utilities received any of the power generated there, would that necessitate including in the rates interest that is applied to commercial generation of power?

Mr. NELSON. Yes. If that were sold for other purposes than irrigation pumping on Federal projects, that part of the cost would need to be reallocated as commercial power investment and repaid with interest.

Senator DWORSHAK. It would have to be used by the Michaud or the Northside pumping unit in order to get interest-free financing?

Mr. NELSON. That is correct, sir.

I believe now we are ready to discuss the Burns Creek project itself, which would, very briefly, consist of an earth-fill dam, 176 feet high, 1,900 feet long, and I mentioned the storage capacity, together with a 90,000-kilowatt powerplant.

The general plan would be to operate Burns Creek hydraulically, electrically, and financially, with the Palisades project. In fact, the project would be designed as a semiautomatic plant, operated from Palisades, and would, of course, have to be geared most closely to the irrigation releases through Palisades.

Senator ANDERSON. How far away is it from Palisades?

Mr. NELSON. The backwater would be about 8 miles below. The dam itself would be about 20 to 30 miles.

Senator ANDERSON. So it is a very easy project to integrate?

Mr. NELSON. Yes, sir; it would be.

Senator ANDERSON. You probably have answered the question, but I have forgotten it now. How much current will Burns Creek Dam generate?

Mr. NELSON. I am just coming to that now, sir.

Senator ANDERSON. All right.

Mr. NELSON. Burns Creek will about double the firm power output of Palisades. Palisades alone will produce about 140 million kilowatt-hours of firm energy per year. Burns Creek operated with the Palisades will raise that total to 293 million kilowatt-hours. That is of the magnitude of about 50,000 kilowatts of firm.

In other words, Palisades alone produces about 25,000 kilowatts of firm power, and with Burns Creek it will increase that to about 50,000 kilowatts of firm power, and then, of course, there is a great deal of energy that matches the irrigation season loads and a great deal of dump energy.

The total of all energy production on Palisades will be about 635 million kilowatt-hours for an average year, and that would be increased by the two plants operating together to 1,129 million kilowatt-hours.

I have some charts that briefly illustrate this, if you care to see them.

Senator ANDERSON. That would be a very substantial contribution to the power situation; would it not?

Mr. NELSON. Yes, sir; it would be.

Senator ANDERSON. Would that help both the preference customers and those private utilities which have depended upon dump power to some degree?

Mr. NELSON. I would feel that way, sir; yes, sir.

Then, in addition to that, there would, of course, be a very important peaking benefit. It is estimated that Burns Creek and Palisades together would increase the peaking capability by about 2½ to 3 times. We have not placed a value on that energy at this time. We have based the economics of Burns Creek on the present Palisades rate structure for firm, for irrigation pumping power and for secondary. But we have not evaluated that peaking benefit.

Senator ANDERSON. But that would be a very definite benefit; would it not?

Mr. NELSON. Yes, sir. Burns Creek would be operated like this: You could run Palisades 5 days a week for 10 hours and shut down completely on weekends, and use the pondage to maintain uniform releases below Burns Creek. You could operate the large installed capacity of Palisades, for instance, during the nonirrigation season, also, when normal uniform irrigation releases would not use the full capacity of the plant.

I believe now we should say a word about the 100,000 acre-feet of space that is allocated to irrigation use. I mentioned earlier that the Palisades Reservoir itself was oversubscribed by 300,000 acre-feet. We had so many subscriptions that it was necessary to set up an allocation committee to scale down the allocations of space. The water users buying Palisades space will be paying $7.75 an acre-foot. They all specified in their contracts among themselves and with the Government that the next 300,000 acre-feet developed on the river should be operated contractually as though it had the same priority as Palisades water.

So, that being so, the price for the Burns Creek space is also priced at $7.75 an acre-foot.

Senator CHURCH. Mr. Nelson, in that connection, it is my understanding that the proposed Burns Creek Dam will add about 100,000 acre-feet of supplemental irrigation water; is that correct?

Mr. NELSON. Storage space.

Senator CHURCH. Of storage space; yes.

Mr. NELSON. That is correct.

Senator CHURCH. And after the original Burns Creek bill, S. 145, was introduced, the water users in the affected areas raised certain objections to the original proposal in S. 145 and asked that certain changes be made that are contained in section 4 (b) and (c) on pages 5 and 6 of S. 2089; is that correct?

Mr. NELSON. To answer that as constructively as I can, I wouldn't say that they were exactly objections. I would say that after they had analyzed S. 145, some length of time, they suggested some improvements to S. 145, and section 4 (b) and (c) would be corrections, then.

Senator CHURCH. What is your reaction insofar as the Bureau is concerned to these provisions that have been added in section 4 (b) and (c)?

Would you give us the benefit of your viewpoint on those additions?

Mr. NELSON. Yes. I think that my viewpoint, as well as the Bureau's——

Senator ANDERSON. Do you not think you better start out, if you do not mind, by saying that you understand the purpose of the amendments carried in 4 (b) and 4 (c) to be as follows, and then comment on the purposes.

Mr. NELSON. Yes, sir. I believe that my opinion coincides with that of the Department, which is expressed in the letter to the committee chairman. It is briefly this: There are two parts to the recommendation. One is that certain winter water saving costs, a third of those winter water saving costs be assumed by the power revenues from Burns Creek and Palisades development. I would say to that, that that particular problem was not treated in our feasibility report. It was suggested by the watermaster after some study.

We have not had an opportunity to analyze it precisely. I would say this: That there is unquestionably a benefit. There is no question about the benefit of the winter water savings program. That should be done and should be continued. It has been under way since about 1935.

The problem of precisely determining a percentage allocable to Burns Creek is rather difficult.

I think Mr. Crandall has made a stab at that.

We have, too. We recognize that there is a benefit to moving that saved water upstream into Palisades. If the appropriate arrangements can be worked out, I feel that we can show increased earning capacity, probably equaling the amount of the desired financial participation. That is about the best answer I can give you, sir.

The second point——

Senator CHURCH. Subsection (b) of section 4 authorizes you to negotiate with this end in mind; is that correct?

Mr. NELSON. Yes, sir. As I understand that, that permits the Secretary to look into the problem, and if he finds that it can be

justified and is equitable, to go ahead with the contract negotiations. That is satisfactory to us. Our relationships with those water users has always been based on justification. I do not think there will be any argument there. We have a reasonable chance to look into the problem.

The second part of your question turns on the requirement that 80 percent of the 100,000 acre-feet of new space be contracted for before construction starts. I am not sure that I know just exactly why that requirement should be in the legislation.

Perhaps the water users' representative can comment on that.

But, as a matter of policy, of course, the Bureau does undertake to get repayment contracts prior to construction.

In this case, the amount allocated to irrigation to be repaid is such a very small part of the total project cost, we thought perhaps it might be unduly restrictive. But our intentions are certainly to go ahead and execute those contracts promptly.

In view of the Palisades oversubscription we anticipate no difficulty along those lines.

Senator ANDERSON. Mr. Nelson of our committee suggested something to me that ought to be in the record. I would rather he stated it.

Mr. ELMER NELSON. My question was this, Mr. Nelson: What would the average annual yield be of this storage?

Mr. NELSON. 100,000 acre-feet would be used only during a recurrence of the critical period, such as occurred in 1934 to 1936. It will not be drawn out except in a critical year. It would be very small.

Mr. ELMER NELSON. It would be about the same as the Palisades yield?

Mr. NELSON. Yes, operated together with Palisades. But added incrementally, it would not. But it is to be operated as though it were with Palisades. It would be very small, sir.

Mr. ELMER NELSON. Was not the estimate on Palisades yield 322,000 per year, of new water?

Mr. NELSON. Yes.

Mr. ELMER NELSON. About 1,400,000 acre-feet of storage?

Mr. NELSON. That is about right. They should be operated in the same manner, except that certain arrangements might be worked out with the water users' consent, of course, to keep space in the most advantageous reservoir the longest period of time. In other words, you would not draw it concurrently from Burns Creek Dam and Palisades. You would want to keep your powerhead at Burns Creek. I am sure everybody is in agreement with that.

I should mention in passing that since Burns Creek will fluctuate normally only about 4 feet a year, there is a recreational potential there, and a small amount which I will discuss later which has been allocated for certain recreation facilities.

There is also a fisheries problem on Snake River. The fishery resource was there when Palisades came along. The problem is not clearly understood. It involves the effect of impoundments on native trout.

An arrangement has been worked out whereby the Federal Fish and Wildlife Service and the State fish and game department are now studying fish habitat. I believe language was contained in the bill that recognizes any adjustments that might be necessary because of fisheries problems.

Turning now to the financial aspects of the project, it is estimated at January 1956 price levels, Burns Creek will cost $40,310,000, of which $43,000 is allocated to minimum recreational facilities.

Senator ANDERSON. What is the figure again?

Mr. NELSON. $40,310,000, total cost of the project, and $43,000 of that allocated to minimum recreational facilities.

Senator ANDERSON. That was a 1956 figure?

Mr. NELSON. Yes, sir.

Indexing that to January 1957, places the project cost at $44,240,000.

Senator ANDERSON. Why did you raise it? Should not the bid at Glen Canyon bear out some things that have been said in this room about a drop in the heavy construction industry cost?

Mr. NIELSON. Senator Anderson, it helped out, but just before that we had some opposite experiences on Trinity.

Senator ANDERSON. I will not comment on that, of course.

Mr. NIELSON. We are hopeful.

Senator ANDERSON. How much did you raise it? Ten percent?

Mr. NELSON. I think it figures out almost to that; yes, sir.

That is based on the Engineering News-Record and other general indexes for this type of work.

We naturally hope that if the project is authorized and built, we get favorable bids. That has been our experience on Palisades.

Senator ANDERSON. But even at $44 million, you consider it a feasible project?

Mr. NELSON. Absolutely. We can show complete payout, sir, of all reimbursable costs.

Senator ANDERSON. So if you had a break the other way and dropped it the other direction, to say, $38 million, it would be extremely attractive and very easy to pay out?

Mr. NELSON. We would be just that much better off.

Senator ANDERSON. Have you taken into consideration the increased cost of money?

Mr. NELSON. Yes, sir.

Senator ANDERSON. What have you used as a figure?

Mr. NELSON. I have an analysis based on 3 percent.

Senator ANDERSON. Of course, the Government cannot get 3 percent money any more. Does the law provide for an average of a long-term debt?

Mr. NELSON. No, sir.

Senator ANDERSON. What is the provision with reference to interest?

Mr. NELSON. I believe Burns Creek project was figured at 2½ percent, although Palisades was figured at 3 percent.

Senator ANDERSON. The law does not permit it to be done at 2½ percent, does it? Is there a provision here that would put this money at 2½ percent?

Mr. NELSON. It is under reclamation law.

Senator ANDERSON. I know, but reclamation or not, the upper Colorado storage project is not 2½ percent. And Arkansas Fryingpan is not 2½ percent. Is there any reason why this should be 2½ percent?

Mr. NIELSON. Maybe I can clear that up. As I understand, this bill simply provides that the Secretary shall follow basic reclamation law in assessing interest.

Senator ANDERSON. That is nice, but there are some of us that do not like that very well, if the rest of us have to pay a higher ratio, and we are going to have to, there is no reason why this project should be singled out for specialized treatment.

Mr. NIELSON. Mr. Nelson has testified that the report figures the cost at 2½ percent, but he has made a separate analysis on the basis of a 3 percent interest, which shows he still has a feasible project.

Senator ANDERSON. Is that submitted for the record? Do you have that here?

Mr. NELSON. I would be glad to submit it for the record, sir. It is not in the report, of course. I will be glad to do that, sir.

Senator ANDERSON. I think it better be in, because when we got into the project in Texas the other day, we had language put in that is going to increase that interest rate. The short-time obligations of the Government that they put out the other day was 3⅝ percent.

There was a time, only a few years ago, when short-term money was costing the Government under 1 percent, and only a very few years ago when it was costing not over 1½ percent.

When you jump to 3⅝ percent for short-term money, you realize that long-term money will be high priced. The Finance Committee is starting a study of that general situation.

If the sponsors of the bill hope to get it through the Congress, I believe they would insert a provision in here similar to that in the Fryingpan or the Glen Canyon, which took into consideration the average long-term debt at the time the project was started. That is about 2⅞, now.

Mr. NELSON. If I may make a comment, sir, I agree with what you say on the cost of money. Certainly in preparing this report, an attempt was not made to take advantage of that kind of situation.

Senator ANDERSON. I did not mean my comments to be that at all, Mr. Nelson. I simply say that if you have refigured it at 3 percent, I wish you would submit it, because that is what the Congress will have to look at, the possibility of this being 3 percent money.

That means that we would have to take advantage of the fact that there is still $220 billion of long-term, low-interest-rate obligations out that will help to average out the cost.

Mr. NELSON. We will be glad to have some direction on that.

Senator ANDERSON. I think if you put in 3 percent, that is satisfactory. It will not go above that.

I think the last estimate that I saw would raise it to just under 3 percent, somewhat above 2⅞.

(The information requested is as follows:)

The following table illustrates the effect of changing the rate of interest from 2½ percent to 3 percent on Burns Creek. The total amount to be repaid from power revenues of the combined Palisades-Burns Creek operation increases from $95,650,579 to $105,031,772, an increase of $9,381,193. The annual net revenues estimated to be available for repayment of construction costs are $2,368,000. Consequently, the additional $9,381,193 would be repaid in 4 years.

	Using interest rates in feasibility report	Using 3 percent interest rate
Reimbursable construction costs:		
Bearing 3 percent interest	$12,861,000	$52,301,000
Bearing 2½ percent interest	39,440,000	0
Interest free	14,760,000	14,760,000
Subtotal (construction cost)	67,061,000	67,061,000
Interest (including interest during construction):		
3 percent	4,357,860	37,970,772
2½ percent	24,231,719	0
Subtotal (interest)	28,589,579	37,970,772
Total, interest and amortization	95,650,579	105,031,772

Mr. NELSON. They are at 2⅞ on the Glen Canyon money this year.

Senator ANDERSON. It was just a little above 2⅞, maybe it is 2.9. By the time this would get started, it would surely be above 3 percent, if the present trends continue.

Mr. NELSON. We will be glad to do that, sir.

Senator ANDERSON. Will you supply us with language which will substitute that average cost of long-term obligations, for the length of time that the project is authorized?

Mr. NELSON. Yes, sir.

(The information requested is as follows:)

The language requested could follow either the formula used in the Colorado River Storage Project Act or that used in various other recent project authorization acts. If the former is employed, the amendment would consist of substituting a comma for the period in line 7, page 2, of S. 145 or in line 10, page 2, of S. 2089 and adding: "but the interest rate applicable to the commercial power investment in the Burns Creek development under section 9 (c) of the Reclamation Project Act of 1939 (53 Stat. 1187, 1194, 43 U. S. C., sec. 485h) shall be equal to the average rate to maturity, as determined by the Secretary of the Treasury, on the basis of daily closing market-bid quotations during the month of June next preceding the fiscal year for which appropriations for construction of the development are first made on all interest-bearing marketable public debt obligations of the United States having a maturity date of 15 or more years from the first day of said month and by adjusting such average annual yield to the nearest one-eighth of one per centum."

If the other formula is employed, the language to be added at the places indicated above would be: "but the interest rate applicable to the commercial power investment in the Burns Creek Development under section 9 (c) of the Reclamation Project Act of 1939 (53 Stat. 1187, 1194, 43 U. S. C., sec. 485h) shall be equal to the average rate (which rate shall be certified by the Secretary of the Treasury) paid by the United States on its marketable long-term loans outstanding on the date of this act."

Mr. NIELSON. It is from the year advanced.

Mr. NELSON. By way of illustrating the magnitude of the several allocations, I will give you the allocations as they have finally been made in the report of the Secretary of the Interior for the $40,310,000 cost. They show an allocation to commercial power in the amount of $39,440,000, which would be repaid, of course, with interest. There is an allocation to irrigation of $827,000, of which the water users would repay $775,000, leaving $52,000 to be repaid from power revenues. That leaves, then, the $43,000 allocated to minimum recreation as being the only nonreimbursable.

So the project shows about 99.75 percent complete reimbursement, and about 98 percent reimbursement with interest.

Senator ANDERSON. Help me out a little bit. When 90 percent or more of the cost is allocated to power revenues, why cannot the irrigators take care of the last 10 percent? You have them taking care of $700,000 dollars plus, and switching $52,000 over to power revenues. I do not quite understand why, when it is that low, they could not take the whole $800,000, and you could say everything allocated to irrigation is going to be paid by the irrigators.

Mr. NELSON. That is a very valid question, sir, and I think the reason will be this: We must consider the fact that this 100,000 acre-feet is being treated, operationally and by all the contractors on the river, as being combined with the 1,200,000 acre-feet in Palisades, for which they have valid contracts, at a rate of $7.75 per acre-foot, and had we got this 100,000 acre-feet into Palisades, then they would have been required to pay $7.75, based on their repayment ability.

I would say that it would not be equitable to ask these people to pay more than we have already contracted for from the 1,200,000 acre-feet at Palisades.

Senator ANDERSON. Give me the figures again. How much will be allocated to irrigation, and how much of that will the irrigators be able to repay?

Mr. NELSON. The figure which I gave you was $827,000, of which we will collect from the irrigators $775,000, leaving $52,000.

Senator ANDERSON. It is a little bit like saying that if a Member of the Congress goes home for what he regards as business, that he will not be forced to pay the excise tax on his airline fare. You do that just once and every newspaper immediately says that the Government sends you home at the Government's expense, though you are only getting 10 or 15 percent off.

I am not complaining about that, but I do say that you lay yourself open every time you take one of these small contributions.

I would say that if the irrigation farmers are going to stand $775,000 of $800,000 they might just as well take it all and wrestle with it somehow, rather than just say so much has to be repaid from power revenues. But that is not a large point.

Mr. NELSON. We had that matter of principle involving the rest of the space.

Senator DWORSHAK. Mr. Nelson, will that 100,000 acre feet of irrigation water be available on an annual basis or on a variable basis?

Mr. NELSON. No, sir. It will be available only for long-term holdover use. It will not be available on an annual basis. As a matter of fact, the 100,000 acre-feet will create a definite powerhead benefit, which, of course, comes out in the form of increased power production in the dam. But the irrigators are underwriting the cost of the space. They will only use it possibly 2 or 3 times in a 50-year period.

Senator ANDERSON. It is a small point. I thought if you got $39 million to be paid from revenues, you might just as well pay the whole $40 million, of if you are going to try to put some of it on the irrigation users, the farmers, if they are going to take 95 percent of the burden, the extra 5 percent is not going to worry them too much.

Take another look at that. When you come to the actual passage of the bill, it might be simpler to say that this is largely being repaid by power revenues, and what is allotted to irrigation is going to be

paid in full by the irrigators. It would make it a little simpler. It is not very important. Just think about it.

Mr. NELSON. Of course the whole project stands on the cooperation of the irrigators in allowing this integration with Palisades.

Senator ANDERSON. That is why I say that it would not be objectionable if the power revenues repaid the whole cost.

Mr. NELSON. Probably not, sir.

I will turn now to a quick discussion of the benefit-cost ratios. This payout that I have mentioned is a payout of Burns Creek combined with Palisades, so that the figures that I give you on the length of payout in years will be a combined payout of Palisades and Burns Creek working together, because, of course, part of this output is coming from Palisades Dam itself.

The benefit-cost ratio, using the previous (1956) costs that I gave you, would be 1.27 to 1 on a 50-year basis, and 1.48 to 1 on a 100-year basis. I have recomputed the benefit-cost ratio for 1957 costs, and that becomes 1.19 to 1, on a 50-year basis.

The study shows that all costs will be repaid from combined revenues of Palisades and Burns Creek projects in the 42d year of full operation of Burns Creek and the 46th year of full operation of Palisades. That includes, of course, the irrigation subsidy, too, which Palisades itself is carrying.

Actually, the power costs of Palisades will be repaid in 15 years.

Senator ANDERSON. Is that calculation on a 2½ basis?

Mr. NELSON. Yes, sir.

Senator ANDERSON. When that jumps to a 3-percent basis and 1957 costs, what does that do to the payout?

Mr. NELSON. I believe that adds about 4 years to the payout. I will supply that for the record.

It may put the combined payout of the 2 at, I believe, 52 to 54 years. It would be within 50 years of the time that Burns Creek goes on the line.

Senator ANDERSON. What was the other figure? Forty-two years? Forty-two years for Burns Creek and 46 years for Palisades?

Mr. NELSON. If I may start back, I will give you each exactly in context. It goes like this——

Senator ANDERSON. I do not care if it is in context or not. I thought I heard you say that it would be 42 years charged against Burns and 46 against Palisades, that it would take that long to pay it out.

Mr. NELSON. I would like to clear it up. I would like to separate the power payout from the irrigation subsidy payout that is charged to Palisades itself.

Going back, the Burns Creek-Palisades combination will pay out the power investment at the Palisades project in the first 15 years from the time the last Palisades unit goes on the line. The combination will pay out the power investment at Burns Creek in 32 years from the time the last Burns Creek unit goes on the line.

Counting the irrigation subsidy that Palisades must carry, there is complete payout 46 years from the time the first Palisades unit goes on the line, or 42 years from the time the last Burns Creek unit goes on the line.

Senator ANDERSON. Those are the figures I used a second ago, are they not?

Mr. NELSON. Yes, sir.

Now, then, when we add the changed interest requirement, we would add, I believe, about 4 years. I wish to check that and supply it for the record, each of those payout figures that I gave you. That is about right, 4 years, sir, if I use 3 percent.

(The information is as follows:)

Studies of the combined Palisades-Burns Creek payout requirements are summarized in the following table. Column (1) covers payout requirements as presented in the feasibility report. Column (2) assumes 3 percent interest payments on both the Burns Creek and Palisades commercial power allocations. Column (3) reflects the adjustment to 1957 price levels and repayment of the commercial power allocation with 3 percent interest.

Payout comparisons

Item	Feasibility report (1)	1956 price levels 3 percent interest (2)	1957 price levels 3 percent interest (3)
Palisades construction cost	$63,000,000	$63,000,000	$62,000,000
Burns Creek construction cost	$40,310,000	$40,310,000	$44,240,000
Interest rate:			
Palisades (percent)	3	3	3
Burns Creek (percent)	2½	3	3
Years to repay: Commercial power allocation [1]	36	39	44
Years to repay: Costs assigned to be repaid from power revenues [1]	45	49	53

[1] Years of full operation at Palisades powerplant.

Senator ANDERSON. I do not understand that. I would like to see that. I do not know how you can add that. When you raise the interest rate a fifth, you let the payout period only be raised a tenth?

Mr. NELSON. The reason is that we have such a large combined revenue which pays out interest-bearing investment first.

Senator ANDERSON. In this particular instance, the interest-bearing part of it is 95 percent or 90-some percent, so there is not such an awful difference, is there?

Mr. NELSON. No. If you pay the interest-bearing investment out first, that is.

I said——

Senator ANDERSON. I do not see what difference it makes, if you pay it out first or last, if it is 95 percent of the total.

Mr. NELSON. It is a payout combined with Palisades. You are adding Palisades revenues to Burns Creek revenues and paying out the combined obligation. That is the answer, sir. That shows 32 years now, so you would be adding 4 years to the 32, paying the commercial power investment out first. Palisades is already computed at 3 percent.

So all you are carrying is the additional that is added by Burns Creek. But you have Palisades and Burns Creek together to do that.

Senator ANDERSON. How did Palisades happen to get on a 3 percent basis? Is there a general provision in the reclamation law?

Mr. NELSON. In the reclamation law, I may add, of course, that the cost of the money then was less than 3 percent, I believe, when Palisades was built.

Senator ANDERSON. Does that complete your statement?

Mr. NELSON. I believe that completes my analysis of Burns Creek payout, except for one last comment. That is this, sir, that we analyzed Burns Creek incrementally to see what Burns Creek costs would look like standing alone. We did not, of course, take into account any peaking benefits in either analysis. We found that the average cost of all energy at Burns Creek added incrementally, standing alone as an isolated project, would be about 4.56 mills, which is less than the cost of the steam generation delivered to the area.

Senator ANDERSON. Are there any questions, Senator Malone?

Senator MALONE. No.

Senator ANDERSON. Senator Dworshak?

Senator DWORSHAK. No; I do not think so at this time.

Senator ANDERSON. Senator Church?

Senator CHURCH. You have not completed your testimony yet, have you, Mr. Nelson?

Mr. NELSON. Yes; I have.

Senator CHURCH. You have completed your testimony?

Mr. NELSON. Yes.

Senator CHURCH. Are you going to furnish testimony or is the Department going to furnish testimony, with respect to the costs of this project per kilowatt-hour of electricity to be produced, so that we will have some basis of knowing the costs of the power production there? Do you have those figures?

Mr. NELSON. Yes, sir.

Senator CHURCH. Can you supply those?

Mr. NELSON. Yes, sir.

Senator ANDERSON. Was that the figure you just used, of 4.56?

Mr. NELSON. No, sir. The amortization of the Burns Creek project combined with Palisades was calculated on the basis of the present Palisades rate structure, which is, briefly, 4.7 mills, for firm, 4.5 for irrigation season firm, 3.0 for Federal irrigation projects, 3.0 units for seasonal nonfirm, and 2 mills for dump energy.

Senator CHURCH. Are these the contemplated rates that will be charged for the electricity, in these different categories?

Mr. NELSON. Yes, sir. They are the rates that are being charged now under our existing contracts for the Palisades output.

Senator CHURCH. And the payout period for this project is based on those rates, is that correct?

Mr. NELSON. Yes, sir. It is based on those rates.

Senator CHURCH. How did the costs of power production at this proposed Burns Creek Dam compare to the costs of generating power by steam, let us say, the present costs?

Mr. NELSON. I just stated that our analysis showed that the costs of generation at Burns Creek alone was less than the cost of steam in the area.

Senator ANDERSON. I thought you just used a figure of 4.56.

Mr. NELSON. I should have said 4.67. I transposed figures. It is 4.67, the average cost, mills per kilowatt-hour, for all energy. I would want to recompute that, sir, using 3 percent interest, and define my cost figures. That would result in——

Senator ANDERSON. Well, you might not have to change that rate at all, if you change the payout period; is that right?

Mr. NELSON. I do not think so.

We have an analysis on steam-generation cost, one made using information published by the Federal Power Commission. We made an analysis, assuming the costs delivered, for steam of 5.18 mills.

Senator ANDERSON. In any event, people are anxious to buy this present current, and this is going to be produced at about an equivalent rate, and the rate is not too high?

Mr. NELSON. No, sir.

Senator ANDERSON. There is a steady demand for it and, obviously, there is no competitive situation that is producing it as yet.

Senator MALONE. I might ask a question about the steam-power costs. Where is that power delivered at that price?

Mr. NELSON. We assumed steam generation in Salt Lake City and delivery at Goshen under, I think, the most favorable circumstances. We used the same plant factor as that at Burns Creek and we assumed the steam generation in Salt Lake City and wheeling to the Goshen substation, which is where the Burns Creek-Palisades energy is to be delivered.

Senator MALONE. What is your plant factor?

Mr. NELSON. Sixty-two and a fraction percent.

Senator MALONE. What is your load factor? How do you coordinate the two, the plant factor and load factor? Explain for the record just what you mean by that?

Mr. NIELSON. Did you mean to say load factor or plant factor there?

Mr. NELSON. This is plant factor.

Senator MALONE. Why not get it organized and let the engineer do the testifying?

Mr. NELSON. I would like to ask Mr. Martz, the regional power manager, to answer the question.

Senator MALONE. I will ask it again. What is your plant factor and load factor, and what is the basis for both?

Mr. MARTZ. The plant factors are determined on the basis of taking the average annual production of kilowatt-hours in relation to the capacity of the plant, and that is the figure that came out, about 62 and a fraction percent.

Senator MALONE. That is your plant factor?

Mr. MARTZ. Yes.

Senator MALONE. What is the load factor when it is used, and what is the basis for it, or for not using it?

Mr. MARTZ. Load factor generally applies to a load, as such, and I do not have an overall combination, but the load factor of the commercial loads we estimate will be served by these plants will be in the neighborhood of 60 percent.

Mr. NIELSON. Now tell them what load factor is.

Mr. MARTZ. That is what I tried to say in the first place. It is the relation of the energy required by a load to the peak requirement of that same load.

Senator MALONE. In other words, installation is installed capacity and the use?

Mr. MARTZ. I want to distinguish this, that a plant may not exactly match the load, and, therefore, a plant factor can be different and probably will be different from the load factor.

Senator MALONE. Just explain what each one of them amounts to and how you compute it for the benefit of the record, the plant factor

and the load factor, and then why you did not mention the load factor.

Mr. MARTZ. The plant factor is determined by taking the average annual production in kilowatt-hours and divide that by the hours in the year, which is 8,760, which gives an average production figure for the year——

Senator MALONE. Per day?

Mr. MARTZ. Well, it is an average over the year and not necessarily per day.

Senator MALONE. But it is an average for each day?

Mr. MARTZ. Well, it could be. Then if you divide that by the installed capacity of your plant, you get the term that is called plant factor, a ratio, which in this case, is about 62 percent. The load factor is determined in much the same way, except you use the characteristics of the load. There, for a selected period of time, a year, a month, or a day, in this case we are speaking of years, you would take the energy requirement of the load over a year's time and again divide by 8,760 to get an average figure for the year, and then divide that by the peak load during that same interval, which, again, is a year, and you get a ratio which gives you an indication of the characteristic of that load.

The load may not match the plant in respect to the load factor compared to the plant factor.

We have this kind of a situation, that the loads that would be supplied in that area are of two fundamental characters: One, the firm-power load, which runs the whole year through, and is that type of load which would have a load factor of about 60 percent. The irrigation-type load runs only through the irrigation season, perhaps the middle of April into the early part of October, so that using that period of time for measuring the load factor, these pumps run pretty steadily when they are on, you get a higher load factor on an irrigation pumping load than you do on a commercial load.

I do not have figures at hand to say what the load factor would be when you put those things together.

Senator MALONE. Could you compute them for the record, and furnish them for the record?

Mr. MARTZ. Yes; I can do that.

Senator MALONE. It does enter into the cost of power; does it not?

Mr. MARTZ. Well, yes; it does.

Senator MALONE. That is per kilowatt-hour?

Mr. MARTZ. Fundamentally, the low load factor type of loads require high installed capacity and low energy use, which means that you cost per kilowatt-hour is higher for low load factors.

Senator ANDERSON. Could you not check Senator Malone's question when you get the text of today's hearing and insert in the record a concise, appropriate answer to the question Senator Malone raised? It is a very interesting question.

Mr. MARTZ. Yes.

Senator MALONE. That will be furnished, I take it.

Mr. MARTZ. Yes.

(The information requested is as follows:)

American Standards Association approved definitions of load factor and plant factor are as follows:

"Load factor: Load factor is the ratio of the average load over a designated period of time to the peak load occurring in that period.

"Plant factor: The plant factor is the ratio of the average load on the plant for the period of time considered, to the aggregate rating of all the generating equipment installed in the plant."

On the basis of the estimated average year production, the plant factors for the Burns Creek and Palisades powerplants are as follows:

	Plant factor
Burns Creek	0. 627
Palisades	. 636
Palisades and Burns Creek	. 632

The estimated annual load factor of the prospective firm power loads (including firm irrigation pumping loads) to be supplied from the combination of the Burns Creek and Palisades powerplants is approximately 0.40. This load factor is low because of the relatively large amount of power utilized for irrigation pumping.

The production of nonfirm energy accounts for the difference between the above load factor and plant factors. If nonfirm energy is included as a load in the computation of load factor for all of the loads combined, the load factor thus computed will be the same as the plant factor.

Plant factor, rather than load factor, was used in estimating costs of steam-plant energy so that the costs would be based on plants having similar production characteristics.

Senator MALONE. I was interested in all the testimony here as to just why the dam is necessary. Is it an adjunct to the Palisades? Is it an adjunct to the Palisades for some regulatory purpose for irrigation, or what makes it necessary?

Mr. NELSON. Yes, sir; it is both, Senator Malone. It is an afterbay to the Palisades project. It was considered at the time the Palisades project was worked out. In fact, the Federal Power Commission commented at the time that the Bureau ought to be figuring a reregulating dam below to use those releases more effectively.

At the time, we didn't foresee a market for the kind of output that would result, wherein there is a certain base firm and a great deal of energy that matches the irrigation pumping season.

Senator MALONE. That is, if you did build this dam that is now under consideration, then you did not see where you could sell the power to pay for it?

Mr. NELSON. At that time. Now, since Palisades was authorized, there has been a tremendous upsurge in pumping of underground water in Idaho, and also pumping for irrigation use.

Senator MALONE. This pumping would be for underground water which is in addition to any water that is furnished by the afterbay storage or the storage in the dam above this?

Mr. NELSON. That is correct, sir. The Geological Survey has done a lot of work in identifying underground water supplies in Idaho, and particularly in that area. There has been a remarkable development.

Senator MALONE. How much power do you get here, firm power and season?

Mr. NELSON. I have that figure, which I did put into the record earlier.

Senator MALONE. I know you did, but just mention it.

Mr. NELSON. As I recall, we go from 140 million kilowatt-hours of firm at Palisades alone to 293 million kilowatt-hours with the two together. That is firm.

Then we go for total energy, which includes secondary, irrigation season, and all, from 635 million kilowatt-hours for Palisades alone to 1,129 million kilowatt-hours for the average water year.

Senator MALONE. How secondary is this power? What part of the year is it available?

Mr. NELSON. Could I show you a chart that we have?

Senator MALONE. I do not think it is necessary.

Mr. NELSON. It matches the irrigation releases starting in May, June, July, August, and it begins to fall out in September.

Senator MALONE. Is there any other source of power, providing this dam was not constructed, for this use?

Mr. NELSON. The alternate power supplies now come through interconnections that the area has with the Idaho Power Co. and the Utah Power Co.

Senator MALONE. What do they charge for the power?

Mr. NELSON. I think they would probably be better qualified to answer that question. I see they have representatives here.

Senator MALONE. You know, or you would not be trying to build the dam. It must have been of some advantage.

Mr. NELSON. We analyze this as being less than the cost of steam.

Senator MALOHE. How much less?

Mr. NELSON. I quoted the incremental values of just Burns Creek alone, without the benefit of integration with Palisades, as being 4.67 mills as against our analysis of steam costs of 5.18 mills.

Senator MALONE. It would be about three-quarters of a mill difference.

Senator ANDERSON. About a half-mill.

Senator MALONE. About a half-mill?

Mr. NELSON. Yes, on an incremental basis.

Senator MALONE. And that is delivered at the same point?

Mr. NELSON. Yes, sir.

Senator MALONE. Delivered at the same point?

Mr. NELSON. Yes, sir; at Goshen.

Senator MALONE. That is all, Mr. Chairman.

Senator ANDERSON. Senator Dworshak?

Senator DWORSHAK. When you referred, Mr. Nelson, to the 4-foot fluctuating level of water in this Burns Creek Reservoir, you did not discuss the recreational benefits or any allocations nonreimbursable?

Mr. NELSON. I mentioned the $43,000; yes, sir.

Senator DWORSHAK. That is the minimum?

Mr. NELSON. That is the minimum; yes, sir.

Senator DWORSHAK. What is the maximum? Is there any limitation?

Mr. NELSON. I don't think the figure has been mentioned.

Senator DWORSHAK. When you say it is a minimum, there certainly must be some figure above that.

Mr. NIELSON. Senator Dworshak, if I may answer that, that is for providing the minimum of recreation facilities—the minimum facilities required to handle the tourists who will come there.

Senator DWORSHAK. Do you anticipate that you might expend more than that by allocation from power revenues?

Mr. NIELSON. That we anticipate will be done by local, State, or Federal agencies under another program.

Senator DWORSHAK. You are stipulating the Federal allocation be $42,000 for recreational purposes?

Mr. NELSON. Yes, sir; for a boat dock and a few things like that, which is in addition to replacement of existing facilities.

Mr. NIELSON. The bill authorizes only those minimums, Senator.

Senator DWORSHAK. And you have set that figure administratively?

Mr. NIELSON. Yes, sir.

Mr. NELSON. That is based on a National Park Service analysis of the reservoir.

Senator ANDERSON. You said you had one other statement.

Mr. NELSON. Yes. One brief statement I overlooked making bears on the marketability of the output. We have on file requests from the preference customers in the Burley area, 15 of them all told, and they indicated that they would need about 50,000 kilowatts by 1963. Then in addition to that, we have other requests from about four entities, including the municipality of Idaho Falls, in the vicinity of Palisades, and those combined requests have brought that total up to about 96,000 kilowatts, which appears to be far in excess of what we will have available.

We have an analysis by the Federal Power Commission which indicates that before the dam is built, if and when it is built, there would be a requirement for the entire output.

That concludes my statement.

Senator CHURCH. Mr. Chairman, I have one more question I would like to ask.

You have indicated, Mr. Nelson, that the difference in the cost of power produced at Burns Creek and steam power delivered at the same point was about a half-mill What would the difference be in it if you considered it on the basis of integrating Burns Creek with the Palisades project?

Mr. NELSON. The difference would be considerably greater.

Senator CHURCH. That is, since these are so closely connected with one another, I would like to have that figure for the record.

Senator ANDERSON. If you do not have it, supply it for the record.

Mr. NELSON. I will supply it for the record.

(Information requested is as follows:)

AVERAGE COST OF POWER PRODUCED AT PALISADES-BURNS CREEK

The average cost of power from the combination of Burns Creek and Palisades is 3.37 mills per kilowatt-hour based upon total average year generation less allowance for transmission losses.

Senator MALONE. What fuel do you use there for the generation of steam power?

Mr. NELSON. We made some calculations based on what we think the costs are for the Gadsby unit in Salt Lake. You probably are familiar with that. I understand they are using combinations of pitch and oil and gas.

Senator MALONE. And using a coal?

Mr. NELSON. That could be. I think they are interchangeable. They are using petroleum byproducts and coal.

Senator MALONE. I used to be familiar with all the generation plants in the West, but I am not right now.

You know, we have not slacked up very much on this inflation that has been going on 24 years. Is it the record over the last 24 years that when you make an estimate of the cost of a dam, and it takes 2 or 3 years to get the contract let, that maybe it costs more than the estimate? What kind of a record do you have in that regard over the last 20 years?

Mr. NELSON. That record has varied. I think I would have to say in general that costs have been on the upswing, of course. But,

on the other hand, we have had some very pleasant experiences to the contrary. For example, using Palisades, in this locality, we started out assuming an estimated cost of Palisades of $76 million. We are now nearing completion of construction and we are now carrying an official cost estimate of $63 million, and we find now, by elimination of contingencies and so on, it is going to be $1 million less than that.

But that is due to some conservative estimating to begin with. Cost trends are definitely up.

Senator MALONE. Have you had any other experiences?

Mr. NELSON. Yes; we have, sir. We have had increases.

Senator MALONE. What are they?

Mr. NIELSON. Senator, we in the Bureau made a study of our experiences over the last 10 years, estimates versus costs, and we would be happy to send you a copy, because we are very happy with it.

Senator ANDERSON. I think it would be important to put that into the record at this point.

Senator MALONE. Yes; it would.

Could you go further back, about 15 years?

Mr. NIELSON. We would have to do research.

Senator MALONE. Then just give us the 10 years.

(Information referred to follows:)

COMPARISON OF BUREAU OF RECLAMATION COST ESTIMATES OF ALL PROJECTS AUTHORIZED AND STARTED SINCE THE END OF WORLD WAR II, AUGUST 14, 1945–JUNE 30, 1956

Since the end of World War II there have been 47 reclamation projects or separable divisions of projects authorized for construction or rehabilitation. Of these projects 35 have been constructed or are in the process of construction. This construction program covers practically all types of work performed by the Bureau, including earthwork, canal construction, distribution system repair, concrete structures, major concrete dams, powerplants, and transmission lines. The total estimated cost of these 35 projects at the time the work was authorized was $791,300,598.

During the period following the end of World War II, in which these projects were authorized and placed under construction, the cost of labor, materials, and other construction services has continually risen so that construction costs on June 30, 1956, the latest date for which complete cost data are available, are considerably greater than at the close of World War II.

If the estimated costs of reclamation projects and rehabilitation work which were authorized and on which construction was started since World War II were adjusted in accord with the cost indexes and without taking into account any other factors which affect the cost of the projects, such as unforeseen site conditions, change in project plan or bids actually received, the total cost of those 35 projects today would greatly exceed the total estimates at the time the works were authorized. If, for instance, the unspent portion of the estimates of these projects had followed the construction cost indexes of the Engineering News-Record since the time the initial estimates were made, the total of the estimates of construction in progress and actual cost of work completed as of now would be $1,003,323,000. Similarly, if the estimates of these works were based on the composite cost indexes of the Bureau of Reclamation, the total would be $886,396,000. Compared to these figures, the total of the official fiscal year 1957 project cost estimates for the projects under construction and the actual cost of completed work is $815,684,545.

As of June 30 1957, or the end of this fiscal year, construction will have been completed on 17 of the 35 projects or separable divisions of projects, and progress on the remaining 18 ranges from 5 percent on the Trinity River division of the Central Valley project to 99 percent on the American River division of the Central Valley project, and 98 percent on the Wellton-Mohawk division of the Gila project. From the figures shown in the tabulation, it is evident that for all of the 35 projects in this analysis which have been authorized and started since World War II, the

Bureau of Reclamation is completing the work at a total cost of about 3 percent more than the estimates initially furnished the Congress, without any adjustment for inflation. If cost indexes are considered, the projects are being constructed at an estimated cost of 81 percent of what the initial estimate would be if adjusted by the Engineering News-Record index, or 93 percent of what the cost would be if adjusted by the Bureau of Reclamation composite index. The Engineering News-Record index is perhaps the best known non-Federal construction cost index and is based on costs of selected construction materials and common labor. The Bureau of Reclamation composite index is similarly based but it is designed to fit more closely the types of work done by Reclamation in the 17 Western States.

The attached tabulation shows the estimated cost at the time each project was authorized, what the estimated cost would have been at the beginning of fiscal year 1957 if the unexpended portion of the initial estimate had followed the trend indicated by the Engineering News-Record construction cost index and the Bureau of Reclamation composite construction cost index. The tabulation also shows the official current estimated or completed cost of the projects as of fiscal year 1957.

Generally, the estimated costs of individual projects adjusted by construction cost indexes are higher than the current official estimates. The exceptions are those projects such as Cachuma where approximately $15 million was added to the construction cost in addition to price increases as a result of unforeseen and extremely unfavorable conditions encountered in excavating the Tecolote Tunnel. The completion cost for the Eklutna project has greatly exceeded the initial estimate adjusted to reflect general price increases during the construction period by virtue of the fact that the initial estimate was for Reclamation's first job in Alaska and did not completely cover the higher construction costs prevalent in that area, nor did the estimate include adequate provision for the type of construction contemplated. On the other hand, as a result of favorable bids and savings through modification of project plans, it is expected that some of the larger projects such as the American River division of the Central Valley project, the Palisades project, and the Glendo unit of the Missouri River Basin project will be completed at a cost in accord with the current estimates which are substantially less than the estimates initially reported to the Congress.

Considering the overall program which has been authorized and started since World War II, and taking into account both the favorable and unfavorable circumstances in comparing current or completed cost estimates to the authorizing estimates, it is apparent that the Bureau of Reclamation is generally constructing its projects at a cost less than the initial estimates, adjusted to reflect changes in construction costs as indicated by engineering cost indexes applicable to the types of construction involved.

Comparison of Bureau of Reclamation cost estimates at time of authorization; adjusted to reflect subsequent changes in construction cost indexes; and current official estimates of completed costs

This table covers all projects or separable units of projects which have been authorized and placed under active construction between end of World War II and June 30, 1956

Project	State	Estimate at time of authorization			Initial estimate adjusted to date investment actually made [1]		Official estimate, fiscal year 1957 [2]	Estimated percent complete, June 30, 1957 [3]
		Date of authorization, fiscal year	Date of estimate, fiscal year	Amount of estimate	Engineering-News Record construction cost indexes	Bureau of Reclamation composite cost indexes		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Lewiston Orchards	Idaho	1947	1946	$1,466,000	$1,971,000	$1,758,000	$2,484,397	100
Paonia	Colorado	1947	1947	[4] 3,030,000	4,683,000	3,848,000	[4] 6,727,585	30
Arnold Irrigation District	Oregon	1948	1947	220,000	272,000	258,000	206,000	100
Cachuma	California	1948	1947	32,310,000	46,874,000	40,428,000	43,360,456	100
Hayden Lake unit, Rathdrum Prairie	Idaho	1948	1947	90,650	111,000	103,000	118,000	100
Kennewick division, Yakima	Washington	1948	1947	10,736,000	17,589,000	14,287,000	14,057,854	98
Preston Bench	Idaho	1948	1948	453,000	463,000	462,000	450,100	100
Wellton-Mohawk division, Gila	Arizona	1948	1946	24,376,948	43,595,000	33,016,000	36,936,772	98
Ochoco Dam division, Deschutes	Oregon	1948	1948	1,500,000	1,644,000	1,592,000	849,000	100
San Luis Valley, Conejos division	Colorado	1949	1949	4,200,000	4,542,000	4,146,000	3,871,645	100
Solano	California	1949	1948	45,577,000	69,111,000	53,361,000	52,410,000	65
American River division, Central Valley	do	1950	1949	59,200,000	77,039,000	63,881,000	45,647,570	99
Fort Sumner	New Mexico	1950	1948	1,798,000	1,940,000	1,867,000	2,371,407	100
Grants Pass-Northwest pipeline, Deschutes	Oregon	1950	1949	100,000	100,000	100,000	100,000	100
Middle Rio Grande	New Mexico	1950	1947	30,179,000	52,093,000	50,093,000	30,346,243	71
Weber Basin	Utah	1950	1949	69,534,000	97,277,000	76,277,000	70,670,000	44
Sacramento canals, Central Valley	California	1951	1953	54,396,000	62,321,000	54,621,000	56,544,000	9
Eklutna	Alaska	1951	1949	[5] 20,365,400	24,771,000	20,836,000	[6] 32,454,448	100
Alcova powerplant, Kendrick	Wyoming	1951	1951	6,377,000	6,888,000	7,143,000	6,428,100	100
North Side pumping division, Minidoka	Idaho	1951	1948	11,395,000	16,991,000	13,316,000	10,626,000	82
Palisades (present project)	do	1951	1949	76,601,000	101,667,000	82,817,000	62,000,000	96
Vermejo	New Mexico	1951	1950	[7] 2,679,000	3,489,000	2,980,000	2,820,083	100
Savage Rapids Dam, Grants Pass	Oregon	1953	1952	678,000	722,000	705,000	713,490	100
Avondale	Idaho	1954	1953	221,100	230,000	224,000	246,535	100
Dalton Gardens	do	1954	1953	267,800	278,000	271,000	258,660	100
Chief Joseph Dam, Foster Creek division [8]	Washington	1954	1953	4,757,200	5,475,000	4,795,000	3,915,000	48
Haystack Dam, Deschutes	Oregon	1955	1954	1,600,000	1,757,000	1,581,000	1,303,100	89
Michaud Flats [9]	Idaho	1955	1954	4,125,500	4,535,000	4,075,000	4,652,700	50
Palo Verde diversion [10]	California-Arizona	1955	1954	7,099,000	7,780,000	6,990,000	6,255,672	81
Rogue River, Talent division	Oregon	1954	1953	21,065,000	24,300,000	21,210,000	21,188,000	10
Santa Maria	California	1955	1953	16,982,000	18,630,000	16,780,000	15,058,000	40

See footnotes at end of table, p. 320.

Comparison of Bureau of Reclamation cost estimates at time of authorization; adjusted to reflect subsequent changes in construction cost indexes; and current official estimates of completed costs—Continued

This table covers all projects or separable units of projects which have been authorized and placed under active construction between end of World War II and June 30, 1956

Project	State	Estimate at time of authorization			Initial estimate adjusted to date investment actually made [1]		Official estimate, fiscal year 1957 [2]	Estimated percent complete, June 30, 1957 [3]
		Date of authorization, fiscal year	Date of estimate, fiscal year	Amount of estimate	Engineering-News Record construction cost indexes	Bureau of Reclamation composite cost indexes		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Alamogordo Spillway, Carlsbad	New Mexico	1955	1954	$1,526,000	$1,620,000	$1,387,000	$1,044,588	100
Crescent Lake Dam	Oregon	1955	1953	297,000	322,000	294,000	320,000	100
Glendo Unit, Missouri River Basin project	Wyoming	1955	1953	50,859,000	58,009,000	51,159,000	39,249,140	54
Trinity River division, Central Valley [11]	California	1955	1955	224,998,000	244,235,000	249,735,000	240,000,000	5
Total				791,059,5	1,003,323,000	886,396,000	815,684,545	

[1] Amounts remaining to be invested on June 30, 1956, adjusted to reflect construction cost indexes applicable on that date.

[2] For projects completed, estimates shown are actual total costs; see note 11 for Trinity River division; for all others, estimates are as of June 30, 1956.

[3] Proportion of total work actually completed on June 30, 1956, plus estimated fiscal year 1957 program.

[4] Original estimate did not include Minnesota unit. That unit plus Spring Creek Reservoir and other works were included for construction under Public Law 485, 84th Cong. The new total estimated cost of the Paonia project, including the new works authorized by Public Law 485 is $6,727,585.

[5] Does not include congressional reauthorization in fiscal year 1954 increasing funds authorized by $12,635,000.

[6] Includes cost of purchase of old municipally owned powerplant ($1,841 760). This cost is being paid for through reduced power revenues in accordance with power contract No. 14-06-906(E)-1. Appropriations actually spent on construction of project tota $30,612,688.

[7] Estimate did not include acquisition of Reconstruction Finance Corporation bonds which were later authorized under Public Law 542, 83d Cong., 2d sess. (approximately $93,500).

[8] Estimate of $4,798,000 as presented to Congress included $40,800 of Chief Joseph Dam costs.

[9] Estimate of $4,600,000 as presented to Congress included $474,500 representing Palisades and American Falls storage costs allocated to Michaud Flats project.

[10] $500,000 Federal loan to Palo Verde Irrigation District included in totals.

[11] For Trinity River division, cols. (6) and (7) have been revised to reflect indexes as of January 1957; col. (8) has been revised to reflect bids recently received on Clear Creek tunnel and Trinity Dam.

Senator DWORSHAK. Mr. Nelson, you referred to the reduced cost in the construction of the Palisades Dam. You did not mention that there was a revision in the construction mechanism in controlling the flow of the Snake River at the time that the dam was built that affected a very material saving, is that not true?

Mr. NELSON. That is right. That was developed by the contractor.

Senator DWORSHAK. How much did that save?

Mr. NELSON. We don't know. The contractor bid the job, of course, before he made this diversion of the river, so he still got paid for his contract prices. We started out with an official cost estimate of $76 million and we are winding up with a completed cost of about $62 million.

Senator DWORSHAK. What was the figure you said involving the need of power by the 16 public power users or preference customers? What was that figure?

Mr. NELSON. I used the figure 50,000 kilowatts, which they gave us at a public meeting in Burley a couple of weeks ago as being a requirement prior to 1963.

Senator DWORSHAK. I thought that was much lower.

Mr. Chairman, at this point I ask unanimous consent to have inserted in the record a letter from Mayor J. L. Salmon, of Burley, chairman of the Southern Idaho Public Power Users Association, dealing with the various aspects of power requirements, and indicating support of the Burns Creek Reservoir and powerplant.

Senator ANDERSON. Without objection that will be done.

(Letter referred to follows:)

LETTER FROM J. L. SALMON, MAYOR OF CITY OF BURLEY, IDAHO

CITY OF BURLEY,
OFFICE OF THE MAYOR,
Burley, Idaho, May 13, 1957.

Hon. HENRY C. DWORSHAK,
United States Senator for Idaho,
Senate Office Building, Washington, D. C.

DEAR SENATOR DWORSHAK: The Southern Idaho Public Users Association was organized in February 1954, to promote the securing of more electrical power for its 16 users in the Minidoka system. At that time practically all users were exceeding their contracts with the Bureau of Reclamation. After 2 years working, new contracts were achieved reflecting the power available from Palisades, which was summer time power only for this area.

In 1955 these 16 agencies were using 15,421 kilowatts in summer and 16,796 kilowatts in winter. The contracts signed by the 16 in 1956 for power after Palisades came on line provide a maximum for the 16 of 28,250 in summer and 23,586 in winter. The Bureau informs us that this is all the power presently available from existing Government plants. While this new source of power gave temporary relief, it is not the answer to our future power needs brought about by a vast development of our agriculture potential.

One of our members, Raft River REA a typical supplier to the rural area, has already exceeded the contract demand of its contract signed last year for its summer load of 7,628 kilowatts. In 1954 Raft River REA's maximum demand was 4,394 kilowatts in summer which reflects approximately an 80 percent increase in the last 2 years.

The city of Burley, 1 of the typical city users, presently has a maximum contract demand of 7,600 kilowatts in winter and 5,900 kilowatts in summer. The maximum kilowatt demand in 1954 was 4,850 and in 1956 was 5,500 kilowatts. In 1946 it was 2,240 which reflects a 145 percent increase in last 10 years. A potato processing plant located at Burley last winter and asked for electrical power from the municipal system and set its requirements at 2,000 kilowatts. The city could not accept its request, for such load would place the cities demand 500 kilowatts over its present summer load contract with the Bureau.

The future need of the 16 users will greatly exceed their present contracts by 1962, the minimum time in which power could be available from the Burns Creek powerplant. Raft River REA's continued expansion based on the last few years record would require a minimum of 15,000 kilowatts demand in summer of 1962.

The city of Burley's expansion, which is largely wintertime load, under reasonable estimate would reach 8,850 kilowatts demand by 1962, based upon past performance, excluding any new industrial customers. If adequate low-cost power is available in this area, new industries will be attracted here, but if we are always on the borderline, as we are now, we can offer nothing to attract industrial growth to the area. Considering industrial expansion in the city, the need would be 10,750 by 1962.

A reasonable forecast need of the aggregate of the 16 users by 1962 would be a minimum of 45,000 kilowatts demand which is nearly 20,000 kilowatts more than present government capacity as reflected in combined contracts now in effect.

On behalf of the Southern Idaho Public Power Users Association of which I am chairman, I strongly urge that Congress pass immediate legislation to effect early construction of the proposed Burns Creek Reservoir and powerplant.

Yours truly,

J. L. SALMON,
Mayor, City of Burley, Chairman, Southern Idaho Public Power Users Association.

Senator ANDERSON. At this point, I will call as the next witness Mr. Parry.

Mr. LINEWEAVER. Mr. Chairman, while Mr. Parry is coming up here, the staff would like to have Mr. Witmer of the Bureau of Reclamation make up a line-by-line amendment to S. 145 and S. 2089 and submit it for the record, so that when the committee meets, we will have this.

Senator ANDERSON. I hope that will be done.

(The material referred to follows:)

[Committee Print, June 7, 1957, (with proposed amendments for consideration of Committee on Interior and Insular Affairs)]

[S. 145, 85th Cong. 1st Sess.]

[Omit the part struck through and insert the part printed in italic]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain a reregulating reservoir and other works at the Burns Creek site in the Upper Snake River Valley, Idaho, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to assist in the irrigation of arid and semiarid lands in the Upper Snake River Valley, Idaho, to provide facilities for river regulation and the control of floods, to utilize the hydroelectric power opportunities created thereby, and, as incidents to the foregoing purposes, to enhance recreational opportunities and provide for the preservation and propagation of fish and wildlife, the Secretary of the Interior is authorized to construct, operate, and maintain a reregulating reservoir, powerplant, and related facilities at or near the Burns Creek site below Palisades Dam on the Snake River, *the reservoir and powerplant to be substantially in accordance with the report of the Secretary of the Interior entitled "Burns Creek Dam, Powerplant, and Reservoir" dated February 26, 1957.* In so doing, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof and supplementary thereto). The ~~works~~ *reservoir, powerplant, and related facilities* herein authorized shall be considered as features of the Palisades Dam and Reservoir project (Act of September 30, 1950, 64 Stat. 1083) and shall be integrated therewith financially and operationally.

SEC. 2. The irrigation storage ~~space~~ *capacity* in Burns Creek Reservoir shall be reserved for subscription by organizations which have storage rights in Palisades ~~Reservoir, and~~ *Reservoir (the term storage rights being used in the same sense as in the storage contracts heretofore entered into by the Secretary of the Interior with respect to Palisades Reservoir) whether or not under contract before the date of this Act. And* the Secretary may contract with any such organization on the basis of operating plans which, in accordance with contracts heretofore entered into

between the United States and subscribers to Palisades ~~space~~ *capacity*, treat ~~said~~ *the* conservation capacity as having a priority equal to that of the irrigation capacity in Palisades Reservoir. Any Burns Creek irrigation ~~storage space~~ *capacity* which is not so subscribed within six months from the time when funds are first made available for starting construction of the Burns Creek development shall then be made available for use ~~in accordance with the Federal reclamation laws~~ *without the benefit of such equal priority.*

SEC. 3. (a) ~~The Secretary is~~ *There is hereby* authorized *to be constructed*, in connection with the Burns Creek development, ~~to construct~~ minimum basic public recreational facilities and *the Secretary is authorized* to arrange for the operation and maintenance ~~of the same~~ *thereof* by an appropriate *Federal agency, or by an appropriate* State or local ~~organization or agency~~ *body should the Governor of Idaho so choose.*

(b) The Secretary may make such reasonable provision in *connection with* the works of the Burns Creek development as, upon further study in accordance with section 2 of the Act of August 14, 1946 (60 Stat. 1080, 16 U. S. C., sec. 662), he finds to be required for the preservation and propagation of fish and wildlife. An appropriate portion of the cost of the development shall be allocated as provided in said Act and it, together with the portion of the construction cost allocated to recreation and the operation and maintenance costs allocated to these functions, shall be nonreimbursable and nonreturnable under the reclamation laws.

(c) So far as the Secretary finds the same to be consistent with safety and with efficient operation for the primary purposes of the development, Burns Creek Reservoir and lands adjacent thereto ~~which are owned~~ *that are reserved or acquired* by the United States shall be open to free public use for lawful hunting and fishing purposes, and free access thereto for those purposes shall be assured.

(d) During times when releases for other purposes are less than one thousand cubic feet per second, a release of this amount from Burns Creek Reservoir shall nevertheless be maintained for the benefit of downstream fishlife, but this release may be reduced for brief temporary periods by the Secretary whenever he may find that maintenance thereof is harmful to the primary purposes of the project.

SEC. 4. *(a)* To assist in the construction of the works authorized by section 1 of this Act, the Secretary may, notwithstanding the last sentence of section 2 of the Act of September 30, 1950 (64 Stat. 1083), construct all necessary facilities to deliver power to the site of said works. The power-generating and transmission facilities authorized to be constructed by section 1 of this Act shall be subject to the second sentence of section 2 of said Act of September 30, 1950, and shall, to the greatest possible extent consistent with existing contractual obligations, be operated in conjunction with and connected to the facilities covered by such second sentence to the end of producing and marketing the greatest amount of power and energy. Nothing contained in this Act shall be construed to affect adversely the application in aid of irrigation, under sections 2 (b), 3 (a), and 5 of the Act of August 31, 1954 (68 Stat. 1026), of net power revenues received from the Palisades Reservoir and developments combined therewith for payout purposes under said Act of September 30, 1950.

(b) The Secretary is authorized to amend contracts heretofore made under the Acts of September 30, 1950, supra, and of August 31, 1954, supra, whereby the water users assumed an obligation for winter power replacement based on the winter water savings program at the Minidoka powerplant to relieve the contractors ratably by one-third of that obligation, and to make new contracts under these Acts on a like basis. To the extent such annual obligations are reduced, the cost thereof shall be included in the costs to be absorbed by the power operations of the Palisades project.

(c) The actual construction of the facilities herein authorized shall not be undertaken until at least 80 per centum of the conservation capacity in Burns Creek Reservoir is under subscription, nor until negotiations have been undertaken in accordance with the provisions of (b) of this section.

SEC. 5. Expenditures for the works authorized by section 1 of this Act may be made without regard to the soil survey and land classification proviso of the Interior Department Appropriation Act, 1954 (67 Stat. 261, 266, 43 U. S. C. 390a).

SEC. ~~5~~ *6*. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act.

[Committee print, June 7, 1957 (with proposed amendments for consideration of Committee on Interior and Insular Affairs)]

[S. 2089, 85th Cong., 1st sess.]

[Omit the part struck through and insert the part printed in italic]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain a reregulating reservoir and other works at the Burns Creek site in the Upper Snake River Valley, Idaho, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to assist in the irrigation of arid and simiarid lands in the Upper Snake River Valley, Idaho, to provide facilities for river regulation and the control of floods, to utilize the hydroelectric power opportunities created thereby, and, as incident to the foregoing purposes, to enhance recreational opportunities and provide for the preservation and propagation of fish and wildlife, the Secretary of the Interior is authorized to construct, operate, and maintain a reregulating reservoir, powerplant, and related facilities at or near the Burns Creek site below Palisades Dam on the Snake River, the reservoir and powerplant to be substantially in accordance with the report of the Secretary of the Interior entitled "Burns Creek Dam, Powerplant and Reservoir" dated ~~March 1956~~ *February 26, 1957*. In so doing, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof and supplementary thereto). The reservoir, powerplant and related facilities herein authorized shall be considered as features of the Palisades Dam and Reservoir project (Act of September 30, 1950, 64 Stat. 1083) and, after separate allocations of costs, shall be integrated therewith financially and operationally.

SEC. 2. The irrigation storage capacity in Burns Creek Reservoir shall be reserved for subscription by ~~entities~~ *organizations* which have ~~allocations of~~ storage ~~capacity~~ *rights* in Palisades Reservoir (*the term "storage rights" being used in the same sense as in the storage contracts heretofore entered into by the Secretary of the Interior with respect to Palisades Reservoir*), whether or not under contract before the date of this Act. And the Secretary may contract with any such ~~entity~~ *organization* on the basis of operating plans which, in accordance with contracts heretofore entered into between the United States and subscribers to Palisades capacity, treat the conservation capacity in Burns Creek Reservoir of equal priority for irrigation to that of the irrigation capacity in Palisades Reservoir. Any Burns Creek irrigation capacity which is not so subscribed within six months from the time when funds are first made available for starting construction of the Burns Creek development shall then be made available for use without the benefit of such equal priority.

SEC. 3. (a) ~~The Secretary is~~ *There is hereby* authorized *to be constructed*, in connection with the Burns Creek development, ~~to construct through agencies of the Department of the Interior or the Department of Agriculture~~ minimum basic public recreational facilities, and *the Secretary is authorized* to arrange for the operation and maintenance thereof by an appropriate Federal agency, or by an appropriate State or local body should the Governor of Idaho so choose.

(b) The Secretary may make such reasonable provision in connection with the works of the Burns Creek development as, upon further study in accordance with section 2 of the Act of August 14, 1946 (60 Stat. 1080, 16 U. S. C. 662), he finds to be required for the preservation and propagation of fish and wildlife. An appropriate portion of the cost of the development shall be allocated as provided in said Act and it, together with the portion of the construction cost allocated to recreation and the operation and maintenance costs allocated to these functions, shall be nonreimbursable and nonreturnable under the reclamation laws.

(c) So far as the Secretary finds the same to be consistent with safety and with efficient operation for the primary purposes of the development, Burns Creek Reservoir and lands adjacent thereto that are reserved or acquired by the United States for the works herein authorized shall be opened to free public use for lawful hunting and fishing purposes and free access thereto for those purposes shall be assured.

(d) During times when releases for other purposes are less than one thousand cubic feet per second, a release of this amount from Burns Creek Reservoir shall nevertheless be maintained for the benefit of downstream fishlife, but this release may be reduced for brief temporary periods by the Secretary whenever he may find that maintenance thereof is harmful to the primary purposes of the project.

SEC. 4. (a) To assist in the construction of the works authorized by section 1 of this Act, the Secretary may, notwithstanding the last sentence of section 2 of

the Act of September 30, 1950 (64 Stat. 1083), construct all necessary facilities to deliver power to the site of said works. The power generating and transmission facilities authorized to be constructed by section 1 of this Act shall be subject to the second sentence of section 2 of said Act of September 30, 1950, and shall, to the greatest possible extent consistent with existing contractual obligations, be operated in conjunction with and connected to the facilities covered by such second sentence to the end of producing and marketing the greatest amount of power and energy. Nothing contained in this Act shall be construed to affect adversely the application in aid of irrigation, under sections 2 (b), 3 (a), and 5 of the Act of August 31, 1954 (68 Stat. 1026), of net power revenues received from the Palisades Reservoir and developments combined therewith for payout purposes under said Act of September 30, 1950.

(b) The Secretary is authorized to amend contracts heretofore made under the Acts of September 30, 1950, supra, and of August 31, 1954, supra, whereby the water users assumed an obligation for winter power replacement based on the winter water savings program at the Minidoka powerplant to relieve the contractors ratably by one-third of ~~their annual~~ *that* obligation, and to make new contracts under these Acts on a like basis. To the extent such annual obligations are reduced, the cost ~~thereof~~ *thereof* shall be included in the costs to be absorbed by the power operations of the Palisades project.

(c) The actual construction of the facilities herein authorized shall not be undertaken until at least 80 per centum of the conservation capacity in Burns Creek Reservoir is under subscription nor until ~~arrangements~~ *negotiations* have been ~~completed~~ *undertaken* in accordance with the provisions of (b) of this section.

SEC. 5. Expenditures for the works authorized by section 1 of this Act may be made without regard to the soil survey and land classification proviso of the Interior Department Appropriation Act, 1954 (67 Stat. 261, 266; 43 U. S. C. 390a).

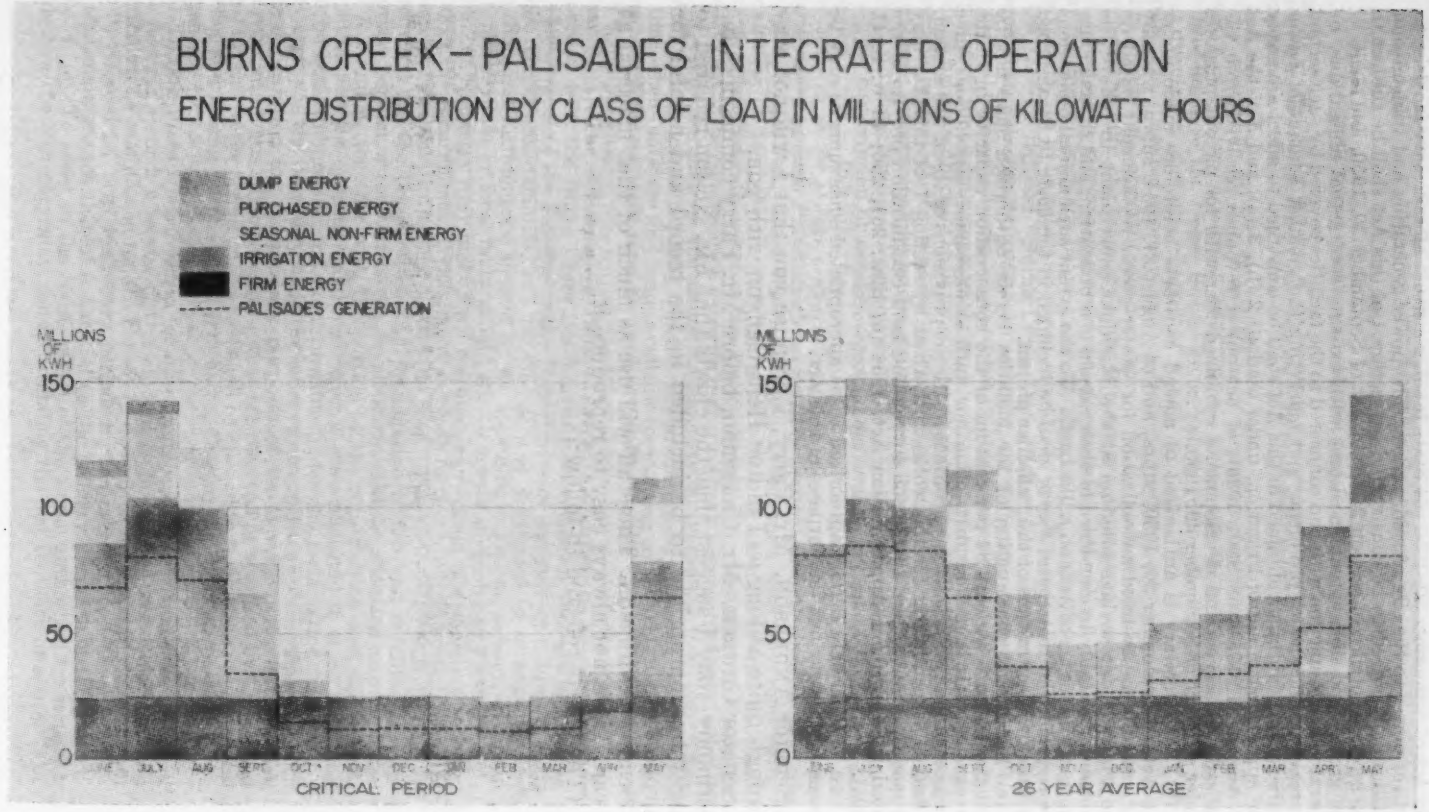
SEC. 6. There are hereby authorized to be appropriated such sums as may be necessary to carry out the purposes of this Act.

Senator ANDERSON. Mr. Parry, I promise you that I will not stay through quite as long as I did on Hells Canyon with you.

Senator CHURCH. Mr. Chairman, before Mr. Parry commences his testimony, may I suggest that the charts that Mr. Nelson referred to might be appropriate to be included in the record and helpful for purposes of the record?

Senator ANDERSON. The staff will use as much of that material as it can. It is not always easy to reproduce it.

(The charts referred to follow:)


BURNS CREEK – PALISADES INTEGRATED OPERATION
ENERGY DISTRIBUTION BY CLASS OF LOAD IN MILLIONS OF KILOWATT HOURS
DUMP ENERGY
PURCHASED ENERGY
SEASONAL NON-FIRM ENERGY
IRRIGATION ENERGY
FIRM ENERGY
PALISADES GENERATION
MILLIONS OF KWH
150
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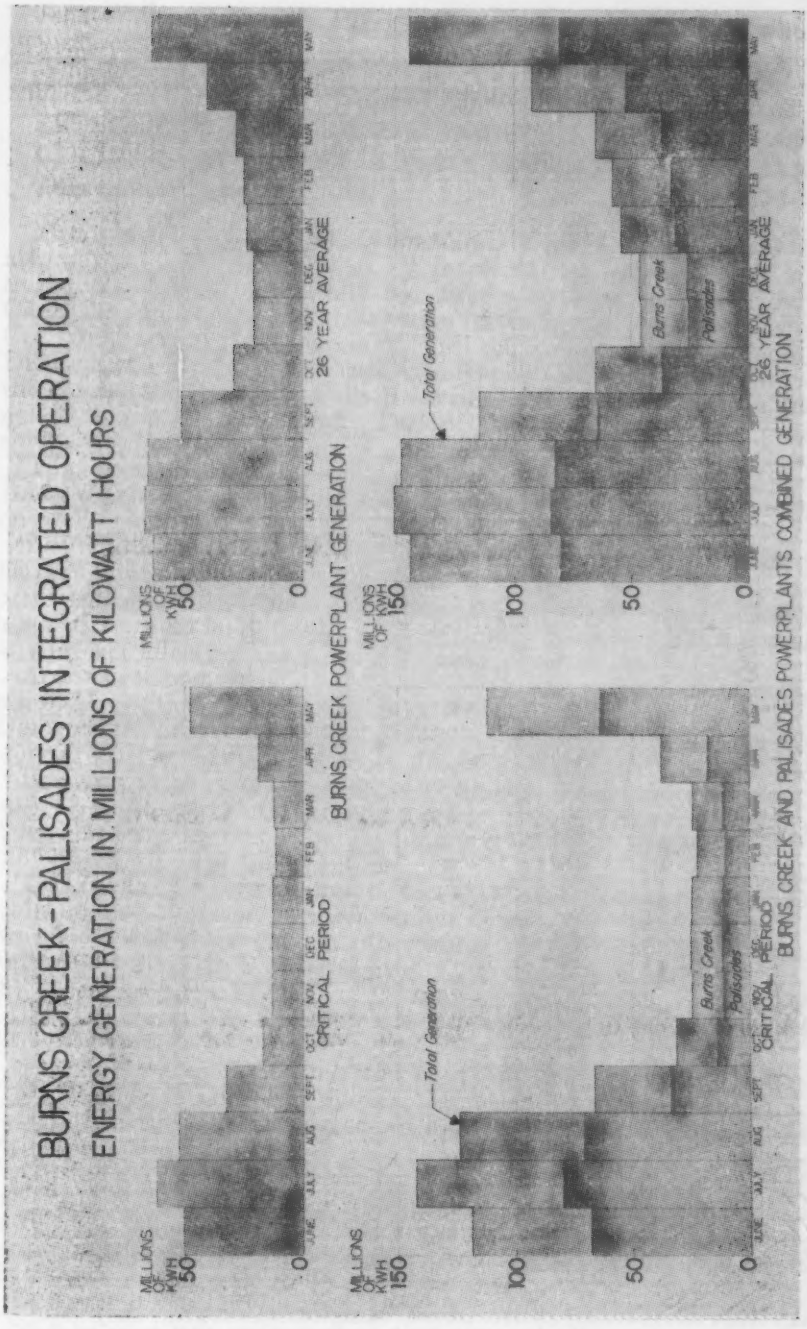
CRITICAL PERIOD
26 YEAR AVERAGE


BURNS CREEK-PALISADES INTEGRATED OPERATION
ENERGY GENERATION IN MILLIONS OF KILOWATT HOURS
MILLIONS OF KWH
50
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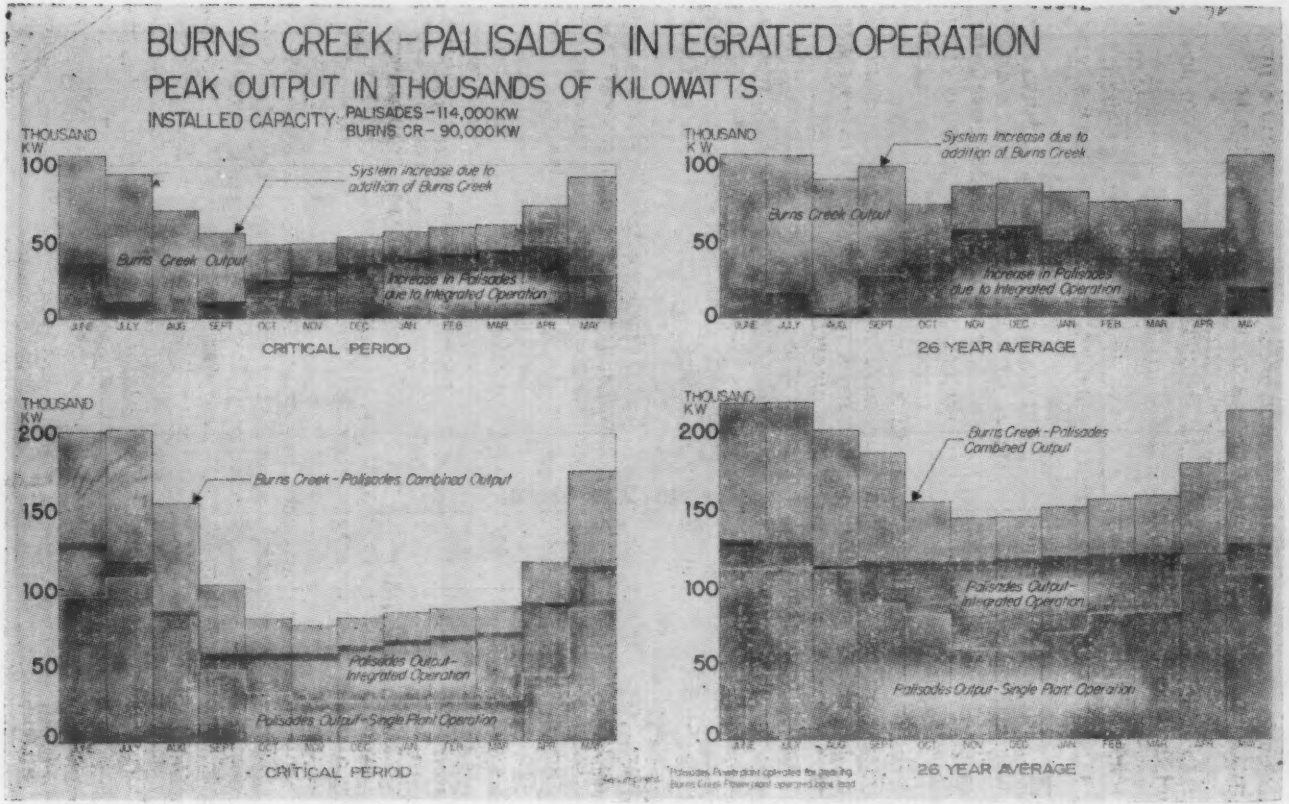
JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY
CRITICAL PERIOD
BURNS CREEK POWERPLANT GENERATION
26 YEAR AVERAGE
MILLIONS OF KWH
150
100
50
0
Total Generation
Burns Creek
Palisades
BURNS CREEK AND PALISADES POWERPLANTS COMBINED GENERATION


BURNS CREEK-PALISADES INTEGRATED OPERATION
PEAK OUTPUT IN THOUSANDS OF KILOWATTS
INSTALLED CAPACITY: PALISADES-114,000KW
BURNS CR-90,000KW
THOUSAND KW
100
50
0
System increase due to addition of Burns Creek
Burns Creek Output
Increase in Palisades due to Integrated Operation
JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY
CRITICAL PERIOD
THOUSAND KW
100
50
0
System increase due to addition of Burns Creek
Burns Creek Output
Increase in Palisades due to Integrated Operation
JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY
26 YEAR AVERAGE
THOUSAND KW
200
150
100
50
0
Burns Creek-Palisades Combined Output
Palisades Output-Integrated Operation
Palisades Output-Single Plant Operation
JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY
CRITICAL PERIOD
THOUSAND KW
200
150
100
50
0
Burns Creek-Palisades Combined Output
Palisades Output-Integrated Operation
Palisades Output-Single Plant Operation
JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY
26 YEAR AVERAGE

Senator ANDERSON. Mr. Parry, will you state your name and whom you represent?

STATEMENT OF R. P. PARRY, ATTORNEY, TWIN FALLS, IDAHO, REPRESENTING THE TWIN FALLS CANAL CO., THE NORTH SIDE CANAL CO., THE AMERICAN FALLS RESERVOIR DISTRICT, AND THE COMMITTEE OF NINE

Mr. PARRY. Mr. Chairman, my name is R. P. Parry. I am an attorney in Twin Falls, Idaho. I represent the water users in the Snake River area, specifically our firm represents the Twin Falls Canal Co., which serves 200,000 acres of land; the North Side Canal Co., which serves 165,000 acres of land; the American Falls Reservoir District, which contributed cash in advance to a substantial part of the cost of the American Falls Reservoir, and which included about a half million acres of land. Part of that overlaps the two canal companies I mentioned.

That group of companies divert their water principally at Milner Dam, which, as has been mentioned, is the lowest point of diversion on the Snake River.

In addition to those companies, I have been authorized to appear here for the waters users on the entire river, the Committee of Nine, our friend Mr. Crandall and others, totaling in all some 1,200,000 acres of irrigated land, people who are vitally interested, of course, in any project affecting the use of the Snake River water.

As has been mentioned, the Minidoka Dam and powerplant occupies a middle position between the American Falls Reservoir and Milner Dam. The American Falls Reservoir is the lowest storage reservoir storing water available for gravity diversion in Idaho.

Because of its being the lowest, as we build more and more reservoirs upstream, it becomes increasingly more profitable each year to empty American Falls Reservoir first, as for one reason that it can be refilled the easiest of any of the reservoirs.

Along in the 1930's, we found the fact that this Minidoka powerplant, which had an old priority, was a serious detriment to the filling of the American Falls Reservoir. In other words, this old, original American Falls powerplant has a water right of 2,700 second feet dating back to the early 1900's.

The American Falls Reservoir was not built until in the 1920's. As a result of that——

Senator ANDERSON. I think you used American Falls both times.

Mr. PARRY. If I did, I misspoke. Minidoka has a water right along in the early 1900's. The American Falls water right is along in the early 1920's.

Accordingly, each time there has been a dry cycle, and it was the most apparent in the 1930's, if, during the winter season the Minidoka powerplant was operated, it was draining out water which the irrigators felt should have been stored in American Falls and, as a result of that, we were unable to fill American Falls.

In 1 year it was only 50 percent filled.

So a scheme was concocted at that time which was temporary in nature, and which was later put into permanent form in a general contract covering the operation of the river that grew out of the construc-

tion of Palisades Dam, which we call generally the Palisades contract. It covers many other things.

There are approximately 100 canal companies and irrigation districts diverting water from the Snake River between Palisades Dam or this new Burns Creek Dam and Milner Dam.

In brief, this contract provides that the water users, acting through an advisory committee and proper officials, have the right to store water in their reservoirs, and cut down the power production at the Minidoka plant during the wintertime, but the cost of replacing that power goes back on the water users, which is a thing that has hurt them for some time.

In other words, there is a basic disagreement that an older Federal power right should take away irrigation water. For that reason the water users are supporting the construction of the Burns Creek Dam. We think, as has been mentioned by Mr. Nelson, that it has virtues of a regulatory body of water because of the large number of canals below it and the fact that it is not feasible to operate those canals with the water fluctuating up and down several times a day, and that sort of thing.

As has been mentioned, it is substantially a power dam, and it is the belief of the water users that that being true, that the Burns Creek power production should get under and support a part of this cost of storing water in the reservoirs which is now being borne by the water users.

In other words, each year there is a payment to the Government for replaced power. It is rather a complicated 20-year moving average setup. Then that is charged as a part of the O. and M. cost of the reservoirs, and that is assessed back to the farmer. So the farmer in the long run pays it.

Personally, I think the water users have been very moderate in only asking that Burns Creek pay a third of that cost. I think that actually they would have been justified in asking a larger percentage.

As has also been mentioned by Mr. Nelson, it is practical and desirable, on this so-called saved water, it is desirable, at least initially, that it be held in the Palisades plant, and then, if needed, transferred down to American Falls. It will run through the powerplants of both Palisades and Burns Creek, if built.

It is, I think, quite evident that this saved water will produce more than enough additional power than would be true if it were allowed to run down the river, run the Minidoka plant, to offset the amount the water users are asking to be charged.

In addition, as has been mentioned, there will be 100,000 acre-feet of irrigation storage in Burns Creek, which will be treated, as we think should be treated, identical with Palisades. In other words, Palisades is about the last good storage right on the river, so far as value is concerned.

If Burns Creek came in with a later priority, you could only fill it if, after, and when Palisades is filled, and there might be a great gap of years. So a plan was worked out when Palisades was built and the water allocated. As has been mentioned, those who applied for Palisades water only got 73 percent, approximately, of the water they applied for. So the water users at that time agreed that when subsequent reservoirs were built, such as Burns Creek, that the storage water in that later reservoir should have the same priority as Palisades

and should be allocated first to those who were cut down in their Palisades applications.

Therefore, the water users in their annual meeting out there in Idaho Falls in March—and they again reiterated it at the meeting of the reclamation association—thought that there should be added in the legislation to be passed on Burns Creek the added provision that before construction starts on this predominantly power project, that at least 80 percent of this irrigation water should be under contract so that prior to the starting of the construction we could work out these problems that I have mentioned, which are very essential to the water users and which would not have any detrimental effect, as we see it, upon the powerplant.

Senator ANDERSON. You mentioned a moment ago the power revenues from the Minidoka Dam. All those revenues go to the benefit of the irrigators; do they not? They do not come into the Federal Treasury?

Mr. PARRY. I don't know that I mentioned the power revenues at Minidoka Dam. The water users pay money over to those who operate the Minidoka Dam. The Minidoka Dam, as Mr. Nelson has mentioned, is operated at least for the benefit of those two irrigation districts down there, being an old, old project.

The water users, of course, have been working with our representatives here in the Senate and the Congress for some year or more in getting legislation for Burns Creek, and have appreciated the efforts of Senator Dworshak in introducing S. 145.

As has been mentioned, in the meantime these new ideas have come up which we think are a proper part of legislation that would cover it. Those who are in charge of the larger canal companies and irrigation districts, and myself, have found that the time to get these things ironed out is before a project starts and not afterward.

We get along very, very fine with Mr. Nelson. We have not always gotten along so well with all of the men out there.

It seems to us, therefore, that both the subsections of the bill which have been recommended should be included, and that to that extent we disagree with the Bureau in saying that the one with reference to the priority of contracts should be eliminated.

Senator ANDERSON. The Bureau was not very strong about it.

Mr. PARRY. I did not think so.

Senator ANDERSON. They were rather mild on that subject. They simply said that they preferred maybe not to have it in.

Mr. PARRY. We prefer very strongly to have both of them.

Senator ANDERSON. Do you think the water users out there agree with you on that, that they would want to have it in?

Mr. PARRY. I rechecked last night by telephone, to recheck on that, and I think that they are unanimous in their desire, Mr. Chairman.

Senator CHURCH. Mr. Parry, are these recommendations that you mentioned contained in a manner that meets with your approval in subsection (b) and (c) of section 4 of S. 2089 that I introduced?

Mr. PARRY. Yes, sir.

Senator ANDERSON. We would be perfectly safe in assuming that if we reported out the legislation, that those people that use this water and consented to this, would like to have those sections in the bill?

Mr. PARRY. That is correct, Mr. Chairman.

Senator ANDERSON. Senator Dworshak?

Senator DWORSHAK. You represent the committee of nine of Water District 36?

Mr. PARRY. Yes; in this manner: The committee of nine and Water District 36——

Senator DWORSHAK. I mean on this occasion.

Mr. PARRY. On this occasion, yes, I do, Senator, yes.

Senator DWORSHAK. You referred to the resolution adopted in March, specifically March 4, 1957, at their annual meeting, that is, the committee of nine, at Idaho Falls?

Mr. PARRY. Yes.

Senator DWORSHAK. Resolution No. 8 was adopted covering these two amendments?

Mr. PARRY. Yes.

Senator DWORSHAK. Are those the only amendments which were proposed or recommended by the water users at that time?

Mr. PARRY. So far as I am advised, that is correct.

Senator DWORSHAK. At this point, I would like to have inserted the resolution, Mr. Chairman. I ask permission to have introduced in the record the resolution which was adopted by the Committee of Nine on March 4.

Senator ANDERSON. Without objection, that will be included.

(Resolution referred to follows:)

ADOPTED ANNUAL WATER MEETING OF DISTRICT NO. 36, IDAHO FALLS, IDAHO, MARCH 4, 1957

RESOLUTION NO. 8

Whereas the proposed Burns Creek Reservoir will serve as an equalizing reservoir making it possible to more fully utilize power production for peaking purposes at Palisades Dam besides furnishing additional power production needed in this area and about 100,000 acre-feet of additional storage for use as supplemental irrigation: Therefore be it

Resolved, That the Snake River water users at their annual meeting held in Idaho Falls, Idaho, on March 4, 1957, hereby approve the construction of the Burns Creek project on the condition that the authorization act for that project contain a provision that no construction work will be undertaken until repayment contracts for disposal of at least 80 percent of the irrigation space have been signed. The legislation shall so provide and shall include authorization for assumption by the Palisades power system, including Burns Creek, of one-third of the annual cost of the winter power loss now borne by the water users under the Minidoka-Palisades contracts.

Senator CHURCH. Mr. Chairman, at this point, I would like to request that the letter of Mr. Lynn Crandall to me, dated May 3, 1957, stating the position of the water users with respect to the project now under consideration, and recommendations of the water users in that connection, also be included in the record.

Senator ANDERSON. Without objection, it will be so ordered.

(Letter referred to follows:)

STATE OF IDAHO,
DEPARTMENT OF RECLAMATION,
Idaho Falls, Idaho, May 3, 1957.

Hon. FRANK CHURCH,
United States Senate,
Washington, D. C.

DEAR SENATOR: I understand that a month or two ago you were considering introducing a bill in the Senate to authorize the Burns Creek project because the bill of Senator Dworshak would require amendment to conform to the desires of the Snake River water users.

Their position on the Burns Creek project is expressed in the following resolution adopted at their annual meeting in Idaho Falls, March 4, 1957, and was also reiterated in a similar resolution adopted at the recent convention of the Idaho State Reclamation Association in Pocatello.

"Whereas the proposed Burns Creek Reservoir will serve as an equalizing reservoir making it possible to more fully utilize power production for peaking purposes at Palisades Dam besides furnishing additional power production needed in this area and about 100,000 acre-feet of additional storage for use as supplemental irrigation: Therefore be it

"*Resolved*, That the Snake River water users at their annual meeting held in Idaho Falls, Idaho, on March 4, 1957, hereby approve the construction of the Burns Creek project on the condition that the Authorization Act for that project contain provision that no construction work will be undertaken until repayment contracts for disposal of at least 80 percent of the irrigation space have been signed. The legislation shall so provide and shall include authorization for assumption by the Palisades power system, including Burns Creek of one-third of the annual cost of the winter power loss now borne by the water users under the Minidoka-Palisades contracts."

I don't know if you ever introduced a bill containing the restrictions on the Burns Creek project set forth in the above resolution. If not I also don't know whether it would be best to amend the Dworshak bill or introduce a new bill conforming to the water users' views.

I assume that before long committee hearings on the Burns Creek bills will be held at which Bureau of Reclamation officials will present statements of their views on the project. Such statements would naturally be limited originally to the provisions of the bill before the committee.

I think it would be preferable that the bill or bills to be considered by the committees of either House or Senate should contain the restrictive provisions desired by the water users, set out in the language of the resolution, so that the Bureau of Reclamation witnesses could comment on such provisions in their original presentation rather than to have to discover their views by questioning of them by committee members, and introduction of amendments subsequent to the testimony.

Very truly yours,

LYNN CRANDALL, *Watermaster.*

Senator ANDERSON. Thank you very much, Mr. Parry, for your statement. We appreciate the information you have given us.

The next witnesses will be Mr. Irvine and Mr. Hunter, representing the Utah Power & Light.

Mr. IRVINE. Mr. Hunter will make the statement for us.

STATEMENT OF E. A. HUNTER, ADMINISTRATIVE ASSISTANT, UTAH POWER & LIGHT CO.

Mr. HUNTER. Mr. Chairman, I am E. A. Hunter, administrative assistant, Utah Power & Light Co. I have a statement I would like to submit in opposition to the Burns Creek project. With your permission, I would like a very few minutes to tell you what is in that statement.

(The statement is as follows:)

STATEMENT OF E. A. HUNTER, ADMINISTRATIVE ASSISTANT, UTAH POWER & LIGHT CO.

The following statement is made on behalf of Utah Power & Light Co., which company opposes the construction of the Burns Creek project.

Utah Power & Light Co. is a public utility, supplying electric service to 192,000 customers in northern and central Utah, southwestern Wyoming, and southeastern Idaho—that portion of Idaho in which the proposed Burns Creek project would be located.

Your attention is directed to the map entitled "Electric Transmission Facilities in Southeastern Idaho." This map shows the principal transmission lines of Utah Power & Light Co. in its southeastern Idaho service area as well as lines

interconnecting our system with that of the Idaho Power Co., which serves the territory to the west. Our production capacity is located at strategic points on our system, and all of it is connected to the transmission system. Three 130,000-volt transmission lines, which are connected to 125,000 kilowatts of hydro capacity on our Bear River system, extend from Grace south to the Salt Lake City area, where they are connected to the steam-generating capacity and other hydro capacity of our company. Our system is also interconnected with that of the Montana Power Co. The map also shows two Government transmission lines from the Bureau of Reclamation's Palisades project, which connect with our system at the Goshen substation.

The proposed Burns Creek project would involve this part of our service area which area is blanketed with a network of transmission and distribution lines providing complete electric service coverage.

Utah Power & Light Co.'s total service area, in common with the rest of the intermountain area, has enjoyed a tremendous economic growth since the war, and our company has always had plenty of dependable low-cost electric power at proper locations in advance of that growth. No industry has failed to locate in our area because of price or lack of electric power.

During the last 10 years our total peak power demand has increased 180 percent to 585,000 kilowatts. We believe that the peak load will reach 850,000 kilowatts in the next 5 years, and that by 1975 will exceed 2 million kilowatts. We are keenly aware of our responsibility to provide for the increased power requirements of the area and are prepared to expend the large sums of money necessary. In the last 10 years we have spent $130 million for construction of new facilities, including 365,000 kilowatts of new generating capacity, and in the next 5 years we plan to spend $93 million for facilities which will include another 300,000 kilowatts of capacity.

We are fully aware of the importance of an adequate supply of water to this area's economic well-being and have played an active role in bringing about nearly everyone of the water projects we have. In connection with Echo Reservoir on the Weber River, Pine View Dam on the Ogden River, the Deer Creek project on the Provo River, the Bear River compact, and the Palisades project, which is just now being competed, Utah Power & Light Co. was helpful in working out arrangements which contributed much to their success. In the case of the Palisades project, we went on record as favoring this project as is shown by a portion of the testimony of Mr. Corey, of our company, before the Subcommittee on Irrigation and Reclamation of the Committee on Public Lands, House of Representatives, and a special subcommittee on the Committee of Interior and Insular Affairs, United States Senate, 81st Congress, during 1949 hearings on H. R. 5506, which I quote: "With reference to H. R. 5506, now being considered by this committee, I want to emphasize that our company is heartily in favor of the construction of the Palisades Dam and the installation of a powerplant of such capacity as is justified for the generation of available firm power and summer power for irrigation pumping."

Even though the firm power output of Palisades was to be sold in direct competition with our company, resulting in the loss of customers served by us for many years, with a loss of revenue of approximately three-quarter million dollars per year, nevertheless we assisted in the development of the project because it was primarily an irrigation project. We have contracted with the Bureau of Reclamation to wheel project power to preference customers and to purchase Palisades dump power which might not otherwise have a market.

The Burns Creek project is almost entirely a power project. Utah Power & Light Co. firmly believes that construction of the Burns Creek dam, powerplant and reservoir estimated to cost some $44 million is not in the best interest of the residents of the area or the taxpayers of the Nation. We respectfully object to construction of this project for these reasons:

1. The project is primarily for power. It would furnish power to users who are not preference customers thereby taking customers away from Utah Power & Light Co. There is no shortage of power in the area.

Over 90 percent or $40 million of the total estimated cost is allocated to power. It is a very expensive power project. Using the Bureau's 1957 price levels the allocation to power is $447 per kilowatt. Palisades project power cost only $185 per kilowatt.

The powerplant would contain 90,000 kilowatts of generating capacity and the Bureau estimates that in an average water year approximately one-half billion kilowatt-hours would be generated as a result of the project. This is a considerable amount of power to be absorbed in an area where no power shortage

exists. Palisades will supply the power requirements of Bureau projects in the area either authorized or under construction. No power from Burns Creek is allocated to Federal projects. All other area power requirements are being adequately served at present, and both Utah Power & Light Co. and Idaho Power Co. have under construction major additions to their systems which will assure adequate power supply for all purposes.

Page 12 of the Bureau's Burns Creek report lists, among others, these potential customers for its power: the National Reactor Testing Station west of Idaho Falls; phosphorus-processing plants in the vicinity of Pocatello and Soda Springs, Idaho; ground-water pumpers; and landowners who are potential pumpers in an area containing about 65,000 acres of arable land west of Idaho Falls.

AEC's National Reactor Testing Station is now being served jointly by Idaho Power Co. and Utah Power & Light Co. under a recently executed 10-year contract superseding and increasing AEC's contract requirements to 40,000 kilowatts.

With respect to phosphate processing plants, the Idaho Power Co. serves 100,000 kilowatts of electric furnace load for production of elemental phosphorus at Pocatello, and Utah Power & Light Co. serves 2 of the largest electric furnaces in the world using 68,000 kilowatts, at Soda Springs, Idaho, all served under long-term contracts. In addition, Central Farmers Fertilizer Co., a group of Midwest cooperatives, is constructing a phosphorus furnace and fertilizer compounding plant near Georgetown, Idaho, and Utah Power & Light Co. has contracted to supply 37,000 kilowatts of electric power for 15 years.

Particularly disturbing to Utah Power & Light Co. is the item of 191 million kilowatt-hours of non-Federal pumping power (estimated to be approximately 54,000 kilowatt peak), listed in the Bureau's Burns Creek report. A major portion of this power would be sold to present or potential nonpreference pumping customers of Utah Power & Light and Idaho Power Cos., including landowners of 65,000 acres west of Idaho Falls previously referred to. This area, now largely undeveloped, is immediately adjacent to the irrigated land served by Utah Power & Light Co. Utah Power & Light Co. is extending its facilities as rapidly as people develop the area. So far as we know, no pumper in this area, who has made proper request for power, has been turned down.

I would like to refer to the map titled "Rexburg Division Irrigation Pumps Served." It covers the area shown on the transmission map extending from Goshen on the south, Monteview on the west, Dubois on the north, and Ashton in the northeast. The yellow shows irrigated lands, and the purple irrigable lands. In the latter lie the 65,000 acres west of Idaho Falls referred to in the Bureau's report. The dots represent pumps being served by Utah Power & Light Co. The green lines are our transmission and distribution facilities. It is quite apparent that service by the Government to potential pumpers in the area west of Idaho Falls would be in direct competition with the Utah Power & Light Co.

Utah Power & Light Co. is now supplying a total of 31,000 horsepower to serve 605 customers irrigating 107,000 acres in the region shown by the map. Of this amount 26,000 horsepower serves 500 customers farming 97,000 acres in an area generally west and north of Idaho Falls, which is the same area the Bureau claim to contain 65,000 acres of irrigable land which would use Burns Creek power. It should be noted that since 1949 Utah Power & Light Co. has spent $2½ million to construct specific facilities to furnish 23,000 horsepower for new pumping load in the region of 308 customers irrigating more than 50,000 new acres.

2. Our analysis as to the economic feasibility of the Burns Creek project using 1957 price levels shows that it would take over 100 years to repay cost with interest of power facilities alone without contributing to repayment of any irrigation cost. Therefore the integrating of Burns Creek with Palisades severely impairs the economic feasibility of the Palisades project.

3. The irrigation features which are included are too minor to justify the construction of the project on the basis of benefit to irrigation alone. Depending upon which figure is correct, from 2 to 10 percent of the cost of the project is allocated to irrigation. (10 percent is used in the Bureau's report and a later Bureau news release indicated 2 percent. The project provides for only about 100,000 acre-feet of storage water for supplemental irrigation. This compares to 1,200,000 acre-feet of storage capacity in Palisades, 1,700,000 acre-feet in the American Falls Reservoir and the 850,000 acre-feet in Jackson Lake. Inasmuch as Palisades storage is primarily for supplemental irrigation water the 100,000 acre-feet in Burns Creek would add relatively little help to irrigation.

4. $44 million cannot be justified on a project the primary purpose of which is to generate electric power for a region now fully served. This is doubly true in this era when national economy is of such paramount importance.

(The charts referred to were filed with the committee.)

Mr. HUNTER. I respectfully call the committee's attention to the fact that the Burns Creek project is primarily a power project. It is a very expensive power project, $40 million, $447 per kilowatt, as compared to $185 per kilowatt for the Palisades project.

Senator ANDERSON. What about that figure for steam power?

Mr. HUNTER. $115 to $165 per kilowatt for a steam plant. Burns Creek would supply no water for new land. Its only consideration would be supplemental water. The Palisades project is also designed to furnish supplemental water, but when we consider its capacity, 1.2 million acre-feet as compared to only 100,000 acre-feet in Burns Creek, it is obvious that Burns Creek adds little to the farming economy of southeastern Idaho.

Burns Creek is not only a power project, but its advocates propose to supply customers who are not preference customers, and who are now adequately supplied with electric service by Utah Power & Light Co., or Idaho Power & Light Co., which companies have served the majority of the inhabitants of Idaho for many years.

The Bureau includes in its Burns Creek reports, the Atomic Energy Commission's national reactor testing station west of Idaho Falls as a potential customer.

Senator ANDERSON. Would you object to that?

Mr. HUNTER. Yes; we do.

Senator ANDERSON. Why?

Mr. HUNTER. Because just recently the Idaho Power Co., and the Utah Power & Light Co., who have, since the inception of the reactor testing station, supplied its requirements, recently signed a new contract to supply the requirements of this station. This new contract increased the contract demands to double what it was before.

Senator ANDERSON. And they still have not enough power; have they?

Mr. HUNTER. Yes, sir; they have. They have not used nearly the amount of power that has been contracted for to date. Under the old contract, they used a maximum of about 50 percent of the contracted amount, and to date, they are using less than a third of the amount of power contracted for.

Of course, the project is still under development and will undoubtedly grow into that power use. The Bureau has included as potential users of the Burns Creek power, phosphorus-producing plants in the vicinity of Pocatello and Soda Springs, Idaho.

Idaho Power Co. serves about 100,000 kilowatts of furnace load in the vicinity of Soda Springs, and the Utah Power Co. serves 68,000 kilowatts of furnace load at Soda Springs.

I would correct that. The Idaho Power & Light Co. serves at Pocatello in addition, Utah Power & Light has just executed a contract with the Central Farmers Fertilizer Co., a super co-op composed of 15 Midwest co-ops, to supply 37,000 kilowatts of phosphorus furnace load and fertilizer compounding load at Georgetown, Idaho.

Senator ANDERSON. How would they get power from this dam? The fertilizer plant would not be a preference customer, would it?

Mr. HUNTER. No, I am sure it would not.

Senator ANDERSON. How would they get this?

Mr. HUNTER. Well, it might be sold directly to the customers. The details in the report are not worked out on that, but the point is that there is ample power in the area to take care of that.

The rate is satisfactory, but still this powerplant is set up as being built to help supply the power requirements of these phosphate processing plants.

Our point is that it is not necessary, because they are being taken care of at the present time.

Senator ANDERSON. What is your rate to the AEC?

Mr. HUNTER. I believe it is approximately 6 mills for firm power.

Senator ANDERSON. What will the rate be from this organization to AEC?

Mr. HUNTER. They haven't proposed a rate for that. Also, I don't believe there is sufficient firm power to supply the requirements of AEC on a firm basis. Any power they would have would be on a supplemental basis, I am sure.

Senator ANDERSON. I am trying to find out how you are going to be damaged. If this dam is not going to take AEC away from you, why are you worried about it?

Mr. HUNTER. The Bureau in the report says that that is one of the reasons for building the plant. We would like to point out that the plant is not necessary at this time as a power project, because there is ample power in the area to take care of the needs.

Senator ANDERSON. Did you hear any testimony to the effect that the Bureau of Reclamation had applications from preference customers for more power than they can supply?

Mr. HUNTER. Yes, sir; I did.

Senator ANDERSON. Do you think that is false?

Mr. HUNTER. No; I think that is absolutely true.

Senator CHURCH. I would like to suggest that that list of customers and power requests from preference customers aside from AEC that has been supplied to the Bureau be made a part of the record in these hearings.

Senator ANDERSON. I think that would be very desirable. We will have it put into the record.

(The information is as follows:)

Requests for power from Burns Creek development

	Letter date	Kilowatts requested
Separate requests:		
City of Burley, Idaho	Mar. 7, 1955	[1] 10,000
Fall River Electric Cooperative, Inc., Ashton, Idaho	Apr. 20, 1955	3,000
Village of Heyburn, Idaho	Apr. 9, 1956	2,000
City of Idaho Falls, Idaho	Nov. 8, 1956	[2]
Raft River Electric Cooperative, Inc., Malta, Idaho	Nov. 9, 1956	20,000
Lost River Electric Cooperative, Inc., Mackay, Idaho	Apr. 27, 1955	4,000
Salmon River Electric Cooperative, Inc., Challis, Idaho	Apr. 27, 1955	[1] 5,000
City of Rupert, Idaho	May 10, 1955	
Westside Electric Irrigation Cooperative, Inc., Idaho Falls, Idaho	June 29, 1955 and Mar. 6, 1956	[1] 30,000
Subtotal		74,000
Additional requests for Burns Creek power made in public meeting called by Burley Chamber of Commerce Apr. 25, 1957 in Burley, Idaho:		
Village of Albion, Idaho		350
Paul Electric Co., Paul, Idaho		340
The Unity Light & Power Co., Burley, Idaho		1,700
Rural Electric Co., Rupert, Idaho		2,000
Walcott Electric Co., Rupert, Idaho		300
Village of Heyburn, Idaho		[4] 8,000
South Side Electric Lines, Inc., Burley, Idaho		500
Riverside Electric Co., Rupert, Idaho		500
City of Rupert, Idaho		[4] 9,000
Subtotal		22,690
Total		96,690

[1] Amount requested in excess of present contract.
[2] Not stated. City of Idaho Falls has indicated in letter to Governor of Idaho Nov. 8, 1956, that at present rate of growth of city load, Palisades power will be insufficient within 5 years.
[3] Not presently served under contract with the United States.
[4] Estimated requirements stated in meeting totaled 50,000 kilowatts. Duplications of above list have been omitted.

Senator ANDERSON. Proceed.

Next you come to ground water pumpers. Surely you would not contend that the people that own the water that is stored behind the dam should not be able to get the power from it?

Mr. HUNTER. It isn't these pumpers that own the water behind the dam that we are concerned with, Mr. Chairman. It is some farmers up in the areas west of Idaho Falls. Perhaps I can refer to the map.

Senator ANDERSON. We have seen some geological survey reports about the excellence of that ground water supply up there.

Mr. HUNTER. There is very good ground water supply.

Senator ANDERSON. Do you believe it should not be pumped?

Mr. HUNTER. No, sir.

Senator ANDERSON. You believe it should be pumped?

Mr. HUNTER. That it should be pumped and it is being pumped at the present time.

Senator ANDERSON. But you want it pumped with Utah Power Co. or Idaho Power Co. power and not the power from this dam.

Mr. HUNTER. We maintain there is a good job being done by the power companies in that area at the present time. For instance, referring to the map of the pumping area, we are supplying 605,000 customers with 31,000 kilowatts of electricity to pump water for 107,000 acres in that area. 97,000 acres lies in the area west of Idaho Falls which is the area which is proposed to get power from this project.

That area is growing very rapidly, and we are cognizant of that fact. We have spent $2.5 million in the last 7 years to provide facilities to take care of that area. In the last 7 years the load in that area has grown by 23,000 kilowatts.

The number of customers has grown by 84 in number; approximately 50,000 acres have been brought under cultivation.

Senator ANDERSON. Does the Idaho Power Co. serve that area?

Mr. HUNTER. Not that area; no, sir. That is Utah Power & Light Co. area. I do not pretend to be speaking for the Idaho Power Co.

Senator ANDERSON. Mr. Parry generally speaks for the Idaho Power & Light Co. I was trying to find out if you moved into Idaho Power Co.'s territory.

Mr. HUNTER. No, sir. This is Utah Power Co.'s territory.

Senator ANDERSON. Did you get a permit or something from them?

Mr. HUNTER. No, sir. Back along before my time, I do not know exactly when, the Warm Springs Power Co., a predecessor company, supplied that area, and when the company went under we took it over and we were forced to assume the responsibility for supplying the power to that area.

Senator ANDERSON. And you are worried that this dam will cut into your business, and you think it is being taken care of well enough now?

Mr. HUNTER. That is right. There is 54,000 kilowatts for summer pumping power, 181 million kilowatt-hours, indicated in the report to be sold to non-Federal pumping customers.

What customers in the area are there other than the non-Federal pumping customers? There are none.

Senator ANDERSON. I do not want you to drop, but suppose they built the Hells Canyon Dam. Would you not buy from that source?

Mr. HUNTER. If we could buy at a price cheaper than we can produce it by steam. When I say "buy" I mean firm power because dump power is of no material value. We would buy it. But this project is an uneconomical project, we believe, costing $447 per kilowatt as compared to $185 at Palisades and $150 for steam.

I would like to make a few more comments with respect to the economic feasibility. Using the 1957 price levels and analyzing Burns Creek alone without saddling it on Palisades, it would take over 100 years to pay out. I think also, I should make the observation that——

Senator ANDERSON. Where in your paper is the feasibility angle?

Mr. HUNTER. I think it is on page 6.

Senator ANDERSON. Do you have your figures on which you contemplate it will take 100 years?

Mr. HUNTER. Yes, sir.

Senator ANDERSON. Will you submit those to us, please?

Mr. HUNTER. I do not have them in shape.

Senator ANDERSON. Submit them to us, so we can put them into the record.

Mr. HUNTER. I used the figures in the report, with a very simple calculation.

(See p. 57.)

Senator ANDERSON. Would you also supply us, so we may insert it into the record, how you calculate this $447 per kilowatt? It might indicate that you are not giving any credit for the services that might be performed at the Palisades Dam.

Mr. HUNTER. I think I can state that for the record very simply now. I took the total cost of the power allocation based on 1957 costs, which would be something in the neighborhood of $40 million without interest during construction, and I divided that by 90,000 kilowatts, the amount of installed capacity.

Senator ANDERSON. Were you in favor of the Glen Canyon Dam?

Mr. HUNTER. Yes, sir; we were.

Senator ANDERSON. What is its cost on that basis you just outlined?

Mr. HUNTER. I am not completely familiar with the cost. I know there was approximately 1 million kilowatts of capacity. I believe the cost of the project itself was about $263 million.

Senator ANDERSON. No; it is much less than that now; is it not? The whole thing is going to run four hundred and some million dollars, with 1 million kilowatts. It comes to the same figure. How do you think that is feasible and this one is not?

Mr. HUNTER. Because that is a water project.

Senator ANDERSON. Will any of the upper basin States get one drop of irrigation water out of it?

Mr. HUNTER. Not directly.

Senator ANDERSON. I hope California is not going to start using our water; is it?

Mr. HUNTER. What I meant to say is that the dam itself is too low down on the river to actually, by direct diversion, bring water into the upper basin. But, by making it possible to meet water commitments, it will allow for diversion of water into the upper basin.

Senator ANDERSON. You speak now of the central Utah project?

Mr. HUNTER. Yes, sir.

Senator ANDERSON. I do not want to appear critical, but those things which benefit Utah or the Utah Power Co. are practical. Is that the yardstick you use?

Mr. HUNTER. No, sir.

Senator ANDERSON. Utah Power will buy some of the power generated by the upper Colorado project; will it not?

Mr. HUNTER. I think we will; yes, sir.

Senator ANDERSON. And probably be a substantial distributor of it?

Mr. HUNTER. Yes, sir; I think that is correct.

Senator ANDERSON. As long as that condition exists, you regard $400 a kilowatt as feasible. But if someone else is going to distribute it, you regard $447 as infeasible. Does that reduce to its simplest terms what you just said?

Mr. HUNTER. No; I don't think it is. Water is our lifeblood in the West as you know.

Senator ANDERSON. How well I know. But the fact that this is being used in Idaho as contrasted to the fact that the Glen Canyon water will be used in California does not make it any less desirable, does it, as water?

Mr. HUNTER. I would like to give the Senator an example of how we have cooperated on projects even though the power facilities in our point of view were not desirable.

Take the Palisades project. We recognize that Palisades was an irrigation project, and we were heartily in favor of the Palisades project, even though the power output was going to be sold to the customers in the area in direct competition with the power company.

There were three preference customers there that we had served for many, many years. At the time the project was up for authorization, we testified in favor of the bill in spite of that, in spite of the fact that we would lose about three-quarters of a million dollars of revenue a year from these customers, because of competition from Palisades.

Senator ANDERSON. Once the Palisades project is farily well finished, do you anticipate that your overall business will decline?

Mr. HUNTER. The overall business for those three customers——

Senator ANDERSON. For those three, yes; but you have an area being developed. Are you better off with the development of the area?

Mr. HUNTER. When you develop an area, you are always better off.

Senator DWORSHAK. I have one question, please, at that point, Mr. Hunter. Do you know whether at any time during the past several years the phosphate-processing plants at West Maple and Monsanto, in southeastern Idaho, have been forced to curtail operations because of a shortage of power?

Mr. HUNTER. I can't speak for the Idaho company, but there have been no cases, to my knowledge, when the Monsanto Co., which we serve, has been forced to curtail the production outside of the limits of the contract.

Let me elaborate on that. The power that we sell them is an interruptible-type power. We are permitted to interrupt over the peak hours.

Senator DWORSHAK. What would happen if you shut down the delivery of interruptible power? Does that curtail their operations?

Mr. HUNTER. It curtails their operations, but it does not hurt them. Power is available in excess of 95 percent of the time and they do not operate at that high-load factor at the present time. Power is available more often than they need it.

Senator DWORSHAK. How about West Maple?

Mr. HUNTER. I don't know. That is an Idaho Power Co. customer.

Senator DWORSHAK. You do not have anything to do with that?

Mr. HUNTER. No, sir.

Senator DWORSHAK. Is your company prepared to furnish power—I presume steam power—to the large phosphate-processing plants which are locating now in the vicinity of Georgetown?

Mr. HUNTER. Yes, sir. As I pointed out, we have the contract, a 15-year contract, to supply that customer.

Senator DWORSHAK. Do you know that there will be no possibility of a shortage of power developing because you are absolutely sure that you can generate power to meet the increasing needs in that area?

Mr. HUNTER. I am reasonably sure. No one can be absolutely sure, Senator.

Senator DWORSHAK. It is all steam power; is it not?

Mr. HUNTER. No. We have approximately 125,000 kilowatts of hydro on our Bear River. We have some 20 other small hydro plants.

Senator DWORSHAK. No. I mean any increased power that you sell in that area will be steam power; will it not?

Mr. HUNTER. Yes, sir; it will.

Senator ANDERSON. Senator Church?

Senator CHURCH. I have just 1 or 2 questions.

Mr. Hunter, the power that you supply the pumpers up in the Idaho Falls area is steam power imported from Utah, is it not, very largely?

Mr. HUNTER. You can't say where power flows. Actually, hydro power would be the power that actually flows into that area because the hydro plants are the closest to that particular load.

Senator CHURCH. However, the steam power in your system constitutes the largest part of your production?

Mr. HUNTER. Yes, sir; it is the largest part of our production.

Senator CHURCH. What did you say the cost was, 1.5 mills per kilowatt for your steam power? Was that your figure?

Senator ANDERSON. It was nothing like that.

Mr. HUNTER. I have not given a figure yet, Senator.

Senator CHURCH. What is the cost of the steam power? I thought you gave a figure a moment ago.

Senator ANDERSON. It would not be under 5.5 mills.

Senator CHURCH. I do not mean the charge; I mean the cost of production. You were comparing this project at Burns Creek with the cost to you of steam power production. That is the figure I would like you to restate.

Mr. HUNTER. On the installed capacity, dollars per kilowatt, modern steam capacity in our locality costs about $180 per kilowatt.

Senator ANDERSON. To install. That is the machinery. That does not take into consideration the full costs or the operation, and so forth?

Mr. HUNTER. No, sir; it does not.

Senator ANDERSON. You do not sell any steam power under 5 mills, do you?

Senator CHURCH. In the Idaho area?

Senator ANDERSON. Anywhere.

Mr. HUNTER. Our rate for interruptible power, we will put it that way—and I emphasize the point of interruptible—to some of these phosphorus furnace people is around 5 mills.

Senator ANDERSON. But for firm power, it would have to be away above that.

Mr. HUNTER. It would have to be higher.

Senator CHURCH. What about the pumping rate?

Mr. HUNTER. The pumping rate for customers in the area west of Idaho Falls gets down to somewhere between 6 and 7 mills. That is the net rate after taking into account ad valorem tax refunds, which you are familiar with, I am sure.

Senator CHURCH. That is all.

(The following communications were subsequently submitted for the record:)

RAFT RIVER ELECTRIC COOPERATIVE, INC.,
Malta, May 7, 1957.

Hon. CLINTON P. ANDERSON,
United States Senate, Chairman, Subcommittee on Irrigation and Reclamation, Washington, D. C.

SIR: I am sorry to take so long to report to you, as I promised, the facts concerning the applications of the public power users of the Minidoka project in Idaho for power from Palisades Dam.

The facts are much as I tried to convey at the hearing on S. 555.

The Minidoka users depended on the Bureau of Reclamation to be aware of their needs and to provide for them from the Palisades project.

The Bureau had been able to supply them since 1910. The Bureau knew as early as 1947 that they were running out of surplus power since it was at that time that they informed the city of Burley that they would have to discontinue selling them dump power on the space heat rate.

After that there were just informal meetings of the different users and the Bureau officials in which the various users were informed that they would get enough power for their needs from Palisades.

On February 16, 1954, the first formal meeting of the Southern Idaho Power Users Association was held in Burley with the Bureau officials, Mr. Merrill Martz and Mr. Tillery, attending.

The purpose of the meeting was to discuss their future power needs and their allocations of Palisades power.

At this time the public users were informed that most of the firm power had been allocated to the three REA cooperatives in the eastern part of the State and to the city of Idaho Falls and that all but 14,000 kilowatts of the seasonal firm that was available would be required for the Bureau's irrigation pumping projects by 1963.

I would refer to Mr. Fred G. Aandahl's letter of April 19, 1957, to Senator Church (a copy of which I believe you have) to corroborate my statement.

The upshot of the whole thing was that the Minidoka users depended on the Bureau to supply their needs and they now find themselves sold short.

In fact at a meeting of the group in Burley on April 25, 1957, at which they attempted to get some action started concerning the development of American Falls it was revealed that by 1963 the group will be short 50,000 kilowatts.

Very truly yours,

EDWIN C. SCHLENDER,
Manager, Raft River Rural Electric Cooperative, Inc.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D. C., April 19, 1957.

Hon. FRANK CHURCH,
United States Senate, Washington, D. C.

DEAR SENATOR CHURCH: This is in further response to your letter of April 2, 1957, which we acknowledge on April 9, pertaining to a copy of a letter dated March 26, 1957, which you have received from Mr. Edwin C. Schlender, manager, Raft River Rural Electric Cooperative, Inc., and which was addressed to Mr. Gus Norwood, executive secretary, Northwest Public Power Association, pertaining to the difficulties of securing federally generated power from either the Bonneville Power Administration or the Minidoka project of the Bureau of Reclamation.

With reference to the first part of Mr. Schlender's letter pertaining to the contract between the Bonneville Power Administration and the Idaho Power Co., contract No. 14–03–001–11493, is an exchange agreement similar to other contracts BPA has with practically all of the generating utilities in the region, both publicly and privately owned. Under the terms of these exchange agreements, BPA and the utilities interchange electric energy in a manner which takes advantage of diversities in stream flows and loads. Any surplus energy sold by BPA to Idaho Power Co., is billed under the H–3 rate schedule which has a charge of 2.5 mill per killowatt-hour. This surplus energy is the lowest priority of interruptible power sold by BPA and is only sold on an if-available basis after all other contractual commitments of BPA are fulfilled.

With reference to the second part of Mr. Schlender's letter pertaining to the shortage of power on the Minidoka project of the Bureau of Reclamation from which the Raft River Rural Electric Cooperative receives its service, this matter has been thoroughly explained to Mr. Schlender and representatives of the other 15 commercial customers receiving Minidoka power service. However, for your information we will outline briefly the history and present status of this matter.

Because of the load growth of the Minidoka project customers, the total load of those customers by 1955 had not only considerably exceeded the sum of their contract rates of delivery for power, but had grown beyond the Bureau's ability to supply such power. The capacity of the Minidoka project is limited. In 1950 the Bureau entered into a contract with the Idaho Power Co. to transmit power to the Minidoka area from the Boise project (principally from the Anderson Ranch powerplant). Under this contract the company agreed to deliver certain definite amounts of power for these loads and any excess above these amounts would be supplied by the company and paid for by the Bureau of Reclamation. Unfortunately, the Bureau has no way at present of limiting the amount of power

taken by its customers since the customers are served from the interconnected power systems of the Bureau and the company. This resulted in the customers taking more than the combined amounts of power which can be supplied by the Minidoka project and by transmission from the Boise project. In 1955 the Bureau had to pay the Idaho Power Co. for the excess power at a rate which is in excess of that which it received from its customers. Obviously, it was not good business to continue such an arrangement.

As a general policy we do not object to the Bureau of Reclamation purchasing power and energy to make up shortages occasioned by low-water years on the project, but we do not believe the Bureau should purchase power to carry the load growth of its customers over and above the capacities of such projects.

During 1955 and early 1956 the Bureau's regional director at Boise and members of his staff held numerous conferences with the representatives of the 16 commercial customers, including Raft River, served by the Minidoka project and considerable correspondence ensued. As a result in early 1956 new short-term contracts were entered into whereby the customers agreed to reimburse the Bureau for excess cost of power in 1956 occasioned by overruns of contract rates of delivery. Such arrangements were believed not to be necessary in 1957 and 1958 as a limited amount of power would be available from the Palisades project during the summer season at which time the Minidoka project shortages are most serious. It is pertinent to point out at this point that all firm all-year round power from the Palisades project had previously been placed under contract to 4 preference customers; namely, 3 REA cooperatives and the city of Idaho Falls. Likewise, it is anticipated that by 1963 all dependable seasonal power other than 14,000 kilowatts will be needed by irrigation loads for pumping, thus limiting the seasonal firm power available to the Minidoka project to 14,000 kilowatts. The Palisades project wheeling and sales contract entered into in 1956 with the Idaho Power Co. was on this basis. All excess energy sold to Idaho Power Co. and Utah Power & Light Co. is on a withdrawal basis upon reasonable notice. Most of the 16 interim contracts with Minidoka project commercial customers will expire on March 31, 1959, which is prior to the beginning of the 1959 irrigation season. As previously indicated it was contemplated that the additional service available to the Minidoka project from the Palisades project would be sufficient to carry the customers' load growths to that time. It will be necessary for customers who exceed their contract rates of delivery to make arrangements for other sources of supply. Prior to the expiration date of these interim contracts, the Bureau plans to enter into new contracts with the 16 commercial customers for contract rates of delivery within the capacity of the Minidoka project's supply as augmented by available power from the Boise project and the Palisades project. Obviously, the Bureau cannot do more until additional Federal powerplants are constructed in this area. The potential Burns Creek development which has been forwarded by this Department to the Congress would develop needed power.

We are pleased to furnish you with this information. In view of the fact that Mr. Schlender sent copies of his March 26 letter not only to you, but also to Mr. Clyde T. Ellis, Senator Clinton P. Anderson, Senator Henry C. Dworshak, Senator Arthur V. Watkins, and Senator Alan Bible, we are taking the liberty of sending copies of this letter to them.

Sincerely yours,

(Signed) FRED G. AANDAHL,
Assistant Secretary of the Interior.

IDAHO FALLS, IDAHO, *June 14, 1957.*

FRANK CHURCH,
United States Senate,
Washington, D. C.

The city of Idaho Falls endorses and strongly urges authorization of the Burns Creek project. We will appreciate any help you can render.

JOHN B. ROGERS, *Mayor.*

Correspondence Relative to Burns Creek Project Payout

Utah Power & Light Co.,
Salt Lake City, Utah, May 29, 1957.

Mr. Goodrich W. Lineweaver,
Committee Assistant, Interior and Insular Affairs Committee,
United States Senate, Washington, D. C.

Dear Mr. Lineweaver: Attached herewith are six photostats of a tabulation entitled "Burns Creek Only—Repayment Analysis of Burns Creek Project at Janury 1957 Price Levels" which contains the detailed calculations showing that with 2½ percent interest charged on that portion of the cost allocated to power it would take 106 years to pay off the cost of such power facilities. This data was requested by the Chairman, Senator Anderson, for the record (refer to p. 86 of the transcript of the hearing on the Burns Creek project before the Irrigation and Reclamation Subcommittee of the Committee on Interior and Insular Affairs of the United States Senate May 22, 1957).

Also enclosed are six copies of a transmission map entitled "Utah Power & Light Co. Electric Transmission Facilities in Southeastern Idaho" which is described in E. A. Hunter's statement filed with the subcommittee, page 1. This copy is in black and white suitable for reproduction whereas the original map attached to the statement is in color not suitable for reproduction.

We are attaching also six copies of a map entitled "Utah Power & Light Co. Rexburg Division Irrigation Pumps Served." This map also is in black and white suitable for reproduction for the record and is a reproduction of the large map used in the hearings and referred to on pages 5 and 6 of E. A. Hunter's statement filed with the subcommittee, and also on page 83 of the transcript of the hearings.

Sincerely,

E. A. Hunter,
Administrative Assistant.

Burns Creek only—Repayment analysis of Burns Creek project at January 1957 price levels [1] made by Utah Power & Light Co.

Year of study	Fiscal year	Total operating revenue [2]	Operating revenue deductions					Net revenue cols. (3) − (8)	Investment repayment from power revenues					
									Interest-bearing allocation to commercial electric plant				Aid to irrigation—Interest-free allocation	
			Purchased power [3]	Transmission service [4]	All other electric operating and maintenance expense [5]	Provision for replacement [5]	Total cols. (4) through (7)		Interest 2½ percent [6]	Principal	In service end of year [7]	Balance to be repaid	Required aid (interest free) [8]	Balance to be repaid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	1962	$1,702,000	$12,000	$227,000	$178,000	$170,000	$563,000	$1,139,000	$1,054,900	$84,100	$42,197,000	$42,112,900	$3,155,000	$3,155,000
2	1963	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,052,800	86,200	42,197,000	42,026,700	3,155,000	3,155,000
3	1964	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,050,700	88,300	42,197,000	41,938,400	3,155,000	3,155,000
4	1965	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,048,500	90,500	42,197,000	41,847,900	3,155,000	3,155,000
5	1966	1,702,000	12,000	227,000	178,000	170,000	562,000	1,139,600	1,046,200	92,800	42,197,000	41,755,100	3,155,000	3,155,000
6	1967	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,043,900	95,100	42,197,000	41,660,000	3,155,000	3,155,000
7	1968	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,041,500	97,500	42,197,000	41,562,500	3,155,000	3,155,000
8	1969	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,039,100	99,900	42,197,000	41,462,600	3,155,000	3,155,000
9	1970	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,036,600	102,400	42,197,000	41,360,200	3,155,000	3,155,000
10	1971	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,034,000	105,000	42,197,000	41,255,200	3,155,000	3,155,000
11	1972	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,031,400	107,600	42,197,000	41,147,600	3,155,000	3,155,000
12	1973	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,028,700	110,300	42,197,000	41,037,300	3,155,000	3,155,000
13	1974	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,025,900	113,100	42,197,000	40,924,200	3,155,000	3,155,000
14	1975	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,023,100	115,900	42,197,000	40,808,300	3,155,000	3,155,000
15	1976	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,020,200	118,800	42,197,000	40,689,500	3,155,000	3,155,000
16	1977	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,017,200	121,800	42,197,000	40,567,700	3,155,000	3,155,000
17	1978	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,014,200	124,800	42,197,000	40,442,900	3,155,000	3,155,000
18	1979	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,011,100	127,900	42,197,000	40,315,000	3,155,000	3,155,000
19	1980	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,007,900	131,100	42,197,000	40,183,900	3,155,000	3,155,000
20	1981	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,004,600	134,400	42,197,000	40,049,500	3,155,000	3,155,000
21	1982	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	1,001,200	137,800	42,197,000	39,911,700	3,155,000	3,155,000
22	1983	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	997,800	141,200	42,197,000	39,770,500	3,155,000	3,155,000
23	1984	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	994,300	144,700	42,197,000	39,625,800	3,155,000	3,155,000
24	1985	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	990,600	148,400	42,197,000	39,477,400	3,155,000	3,155,000
25	1986	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	986,900	152,100	42,197,000	39,325,300	3,155,000	3,155,000
26	1987	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	983,100	155,900	42,197,000	39,169,400	3,155,000	3,155,000
27	1988	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	979,200	159,800	42,197,000	39,009,600	3,155,000	3,155,000
28	1989	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	975,200	163,800	42,197,000	38,845,800	3,155,000	3,155,000
29	1990	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	971,100	167,900	42,197,000	38,677,900	3,155,000	3,155,000
30	1991	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	966,900	172,100	42,197,000	38,505,800	3,155,000	3,155,000
31	1992	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	962,600	176,400	42,197,000	38,329,400	3,155,000	3,155,000
32	1993	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	958,200	180,800	42,197,000	38,148,600	3,155,000	3,155,000
33	1994	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	953,700	185,300	42,197,000	37,963,300	3,155,000	3,155,000
34	1995	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	949,100	189,900	42,197,000	37,773,400	3,155,000	3,155,000
35	1996	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	944,300	194,700	48,197,000	37,578,700	3,155,000	3,155,000

36	1997	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	939,500	199,500	42,197,000	37,379,200	3,155,000	3,155,000
37	1998	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	934,500	204,500	42,197,000	37,174,700	3,155,000	3,155,000
38	1999	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	929,400	209,600	42,197,000	36,965,100	3,155,000	3,155,000
39	2000	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	924,100	214,900	42,197,000	36,750,200	3,155,000	3,155,000
40	2001	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	918,800	220,200	42,197,000	36,530,000	3,155,000	3,155,000
41	2002	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	913,300	225,700	42,197,000	36,304,300	3,155,000	3,155,000
42	2003	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	907,600	231,400	42,197,000	36,072,900	3,155,000	3,155,000
43	2004	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	901,800	237,200	42,197,000	35,835,700	3,155,000	3,155,000
44	2005	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	895,900	243,100	42,197,000	35,592,600	3,155,000	3,155,000
45	2006	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	889,800	249,200	42,197,000	35,343,400	3,155,000	3,155,000
46	2007	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	883,600	255,400	42,197,000	35,088,000	3,155,000	3,155,000
47	2008	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	877,200	261,800	42,197,000	34,826,200	3,155,000	3,155,000
48	2009	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	870,700	268,300	42,197,000	34,557,900	3,155,000	3,155,000
49	2010	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	863,900	275,100	42,197,000	34,282,800	3,155,000	3,155,000
50	2011	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	857,100	281,900	42,197,000	34,000,900	3,155,000	3,155,000
51	2012	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	850,000	289,000	42,197,000	33,711,900	3,155,000	3,155,000
52	2013	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	842,800	296,200	42,197,000	33,415,700	3,155,000	3,155,000
53	2014	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	835,400	303,600	42,197,000	33,112,100	3,155,000	3,155,000
54	2015	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	827,800	311,200	42,197,000	32,800,900	3,155,000	3,155,000
55	2016	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	820,000	319,000	42,197,000	32,481,900	3,155,000	3,155,000
56	2017	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	812,000	327,000	42,197,000	32,154,900	3,155,000	3,155,000
57	2018	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	803,900	335,100	42,197,000	31,819,800	3,155,000	3,155,000
58	2019	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	795,500	343,500	42,197,000	31,476,300	3,155,000	3,155,000
59	2020	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	786,900	352,100	42,197,000	31,124,200	3,155,000	3,155,000
60	2021	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	778,100	360,900	42,197,000	30,763,300	3,155,000	3,155,000
61	2022	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	769,100	369,900	42,197,000	30,393,400	3,155,000	3,155,000
62	2023	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	759,800	379,200	42,197,000	30,014,200	3,155,000	3,155,000
63	2024	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	750,400	388,600	42,197,000	29,625,600	3,155,000	3,155,000
64	2025	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	740,600	398,400	42,197,000	29,227,200	3,155,000	3,155,000
65	2026	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	730,700	408,300	42,197,000	28,818,900	3,155,000	3,155,000
66	2027	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	720,500	418,500	42,197,000	28,400,400	3,155,000	3,155,000
67	2028	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	710,000	429,000	42,197,000	27,971,400	3,155,000	3,155,000
68	2029	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	699,300	439,700	42,197,000	27,531,700	3,155,000	3,155,000
69	2030	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	688,300	450,700	42,197,000	27,081,000	3,155,000	3,155,000
70	2031	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	677,000	462,000	42,197,000	26,619,000	3,155,000	3,155,000
71	2032	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	665,500	473,500	42,197,000	26,145,500	3,155,000	3,155,000
72	2033	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	653,600	485,400	42,197,000	25,660,100	3,155,000	3,155,000
73	2034	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	641,500	497,500	42,197,000	25,162,600	3,155,000	3,155,000
74	2035	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	629,100	509,900	42,197,000	24,652,700	3,155,000	3,155,000
75	2036	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	616,300	522,700	42,197,000	24,130,000	3,155,000	3,155,000
76	2037	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	603,300	535,700	42,197,000	23,594,300	3,155,000	3,155,000
77	2038	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	589,900	549,100	42,197,000	23,045,200	3,155,000	3,155,000
78	2039	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	576,100	562,900	42,197,000	22,482,300	3,155,000	3,155,000
79	2040	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	562,100	576,900	42,197,000	21,905,400	3,155,000	3,155,000
80	2041	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	547,600	591,400	42,197,000	21,314,000	3,155,000	3,155,000
81	2042	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	532,900	606,100	42,197,000	20,707,900	3,155,000	3,155,000
82	2043	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	517,700	621,300	42,197,000	20,086,600	3,155,000	3,155,000
83	2044	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	502,200	636,800	42,197,000	19,449,800	3,155,000	3,155,000
84	2045	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	486,200	652,800	42,197,000	18,797,000	3,155,000	3,155,000
85	2046	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	469,900	669,100	42,197,000	18,127,900	3,155,000	3,155,000
86	2047	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	453,200	685,800	42,197,000	17,442,100	3,155,000	3,155,000

See footnotes at end of table, p. 61.

Burns Creek only—Repayment analysis of Burns Creek project at January 1956 price levels [1] made by Utah Power & Light Co.—Con.

Year of study	Fiscal year	Total operating revenue [2]	Operating revenue deductions					Net revenue cols. (3)−(8)	Investment repayment from power revenues					
			Purchased power [3]	Transmission service [4]	All other electric operating and maintenance expense [5]	Provision for replacement [6]	Total cols. (4) through (7)		Interest-bearing allocation to commercial electric plant				Aid to irrigation—Interest-free allocation	
									Interest 2½ percent [6]	Principal	In service end of year [7]	Balance to be repaid	Required aid (interest free) [8]	Balance to be repaid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
87	2048	$1,702,000	$12,000	$227,000	$178,000	$170,000	$563,000	$1,139,000	$436,100	$702,900	$42,197,000	$16,739,200	$3,155,000	$3,155,000
88	2049	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	418,500	720,500	42,197,000	16,018,700	3,155,000	3,155,000
89	2050	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	400,500	738,500	42,197,000	15,280,200	3,155,000	3,155,000
90	2051	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	382,000	757,000	42,197,000	14,523,200	3,155,000	3,155,000
91	2052	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	363,100	775,900	42,197,000	13,747,300	3,155,000	3,155,000
92	2053	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	343,700	795,300	42,197,000	12,952,000	3,155,000	3,155,000
93	2054	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	323,800	815,200	42,197,000	12,136,800	3,155,000	3,155,000
94	2055	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	303,400	835,600	42,197,000	11,301,200	3,155,000	3,155,000
95	2056	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	282,500	856,500	42,197,000	10,444,700	3,155,000	3,155,000
96	2057	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	261,100	877,900	42,197,000	9,566,800	3,155,000	3,155,000
97	2058	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	239,200	899,800	42,197,000	8,667,000	3,155,000	3,155,000
98	2059	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	216,700	922,300	42,197,000	7,744,700	3,155,000	3,155,000
99	2060	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	193,600	945,400	42,197,000	6,799,300	3,155,000	3,155,000
100	2061	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	170,000	969,000	42,197,000	5,830,300	3,155,000	3,155,000
101	2062	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	145,800	993,200	42,197,000	4,837,100	3,155,000	3,155,000
102	2063	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	120,900	1,018,100	42,197,000	3,819,000	3,155,000	3,155,000
103	2064	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	95,500	1,043,500	42,197,000	2,775,500	3,155,000	3,155,000
104	2065	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	69,400	1,069,600	42,197,000	1,705,900	3,155,000	3,155,000
105	2066	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	42,600	1,096,400	42,197,000	609,500	3,155,000	3,155,000
106	2067	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	15,200	609,500	42,197,000	0	3,155,000	2,640,700
107	2068	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	0	0	42,197,000	0	3,155,000	1,501,700
108	2069	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	0	0	42,197,000	0	3,155,000	362,700
109	2070	1,702,000	12,000	227,000	178,000	170,000	563,000	1,139,000	0	0	42,197,000	0	3,155,000	0
Total		185,518,000	1,308,000	24,743,000	19,402,000	18,530,000	61,367,000	124,151,000	78,022,700	42,197,000	42,197,000	0	3,155,000	0

[1] Burns Creek total costs at January 1957 price levels of $44,240,000 are taken from Bureau of Reclamation press releases P. N. 15058, Apr. 9, 1957, and P. N. 16785, May 8, 1957. Estimated allocations: $40,187,000 to power, $4,006,000 ($3,155,000 repayable from power revenues) to irrigation, and $47,000 for minimum recreation facilities. These allocations adjusted to January 1957 price levels, are based upon January 1956 price level allocations contained in the report on the Burns Creek Dam powerplant, and reservoir, submitted by the regional director, Region 1, U. S. Bureau of Reclamation, to the Commissioner, U. S. Bureau of Reclamation, in March 1956. (See tables 8, 9, and 10 of that report.)

[2] Total annual operating revenue of $1,702,000 expected from Burns Creek powerplant was obtained by subtracting annual revenue from Palisades ($1,828,000) from annual revenue expected from Palisades and Burns Creek jointly ($3,530,000). These revenues are shown in tables 4 and 3, respectively, of the regional director's report on Burns Creek Dam powerplant, and reservoir of March 1956.

[3] The purchased power credit of $12,000 shown was obtained by subtracting the purchased power required by Palisades alone ($35,000) from the purchased power required by Palisades and Burns Creek jointly ($23,000). These figures are shown in tables 10 and 9, respectively, of the regional director's report of Burns Creek Dam, powerplant, and reservoir of March 1956.

[4] See table 9, regional director's report on Burns Creek Dam, powerplant, and reservoir of March 1956.

[5] See tables 5 and 7, regional director's report on Burns Creek Dam, powerplant and reservoir of March 1956. Tabulated costs at January 1956 price levels have been adjusted to January 1957 price levels.

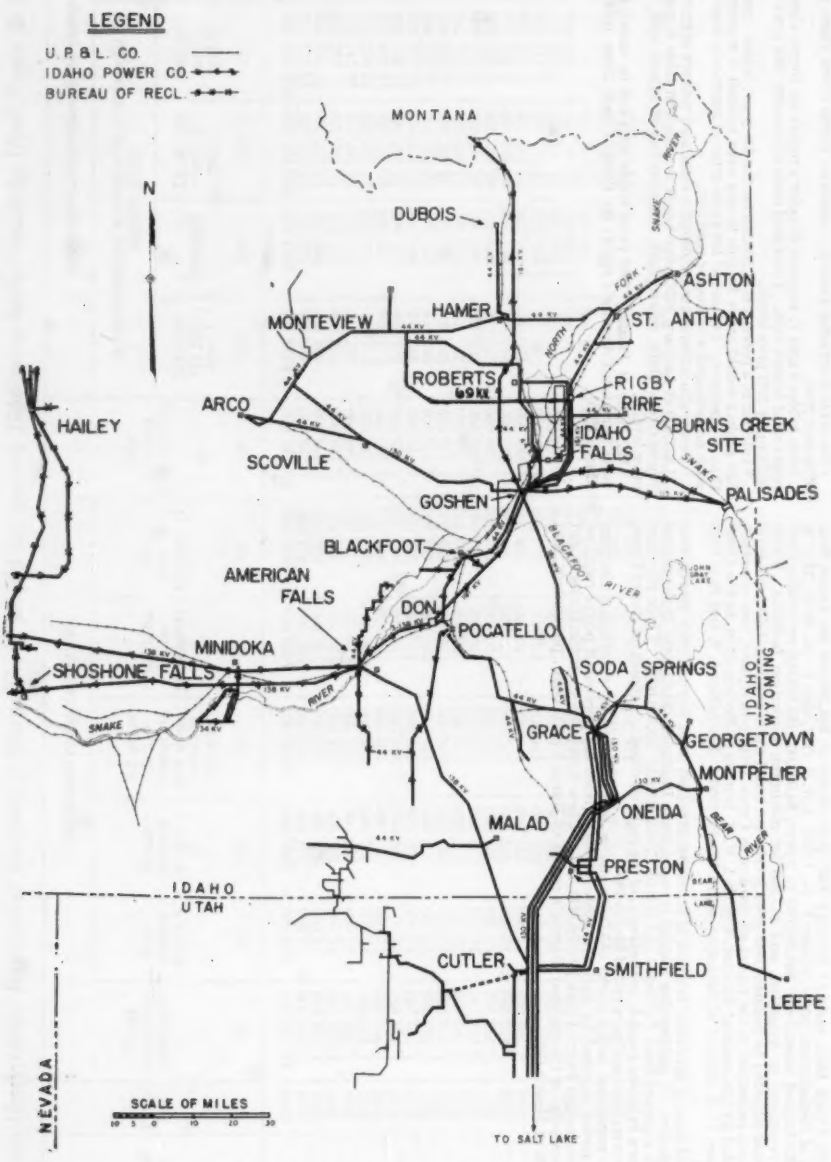
[6] Interest at 3 percent is $1,265,900 for the 1st year, which exceeds net revenues; therefore project would never be able to pay even interest if interest were at 3 percent rather than 2½ percent. (At end of 100 years interest payments would be $77,073,000 in arrears with no principal whatsoever paid off).

[7] Power allocation of $40,187,000 plus estimated interest of $2,010,000 during construction ($1,831,000 at January 1956 price levels as shown in table 9, regional director's report on Burns Creek Dam, powerplant, and reservoir of March 1956, adjusted to January 1957 price levels).

[8] $2,875,000 at January 1956 price levels adjusted to January 1957 price levels. (See table 9, regional director's report on Burns Creek Dam, powerplant, and reservoir of March 1956).

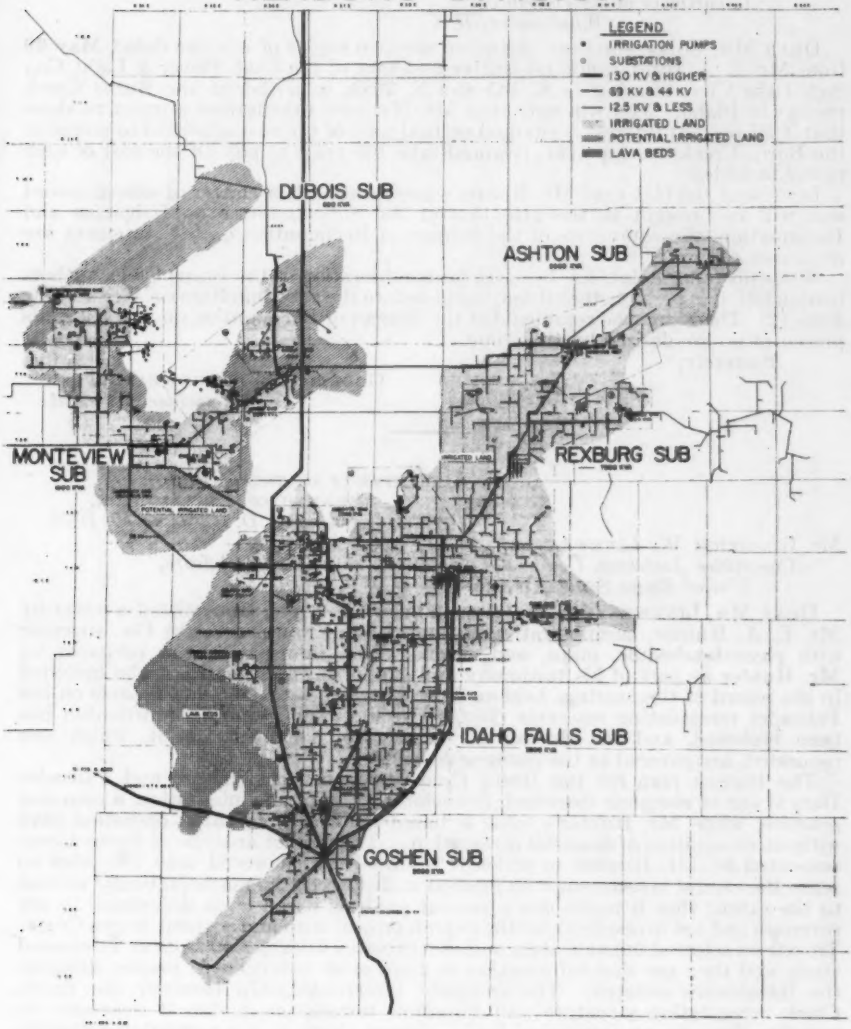
UTAH POWER & LIGHT COMPANY

ELECTRIC TRANSMISSION FACILITIES IN SOUTH EASTERN IDAHO



UTAH POWER & LIGHT COMPANY

IRRIGATION PUMPS SERVED REXBURG DIVISION



UNITED STATES SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
June 4, 1957.

Hon. WILBUR A. DEXHEIMER,
Commissioner of Reclamation,
Department of the Interior,
Washington, D. C.

DEAR MR. COMMISSIONER: Attached are two copies of a letter dated May 29 from Mr. E. A. Hunter, administrative assistant of the Utah Power & Light Co., Salt Lake City, relating to S. 145 and S. 2089, to authorize the Burns Creek project in Idaho. You will note that Mr. Hunter's calculations purport to show that if 2½ percent interest is charged on that part of the cost allocated to power in the Burns Creek development, it would take 106 years to pay off the cost of such power facilities.

In view of the fact that Mr. Hunter's presentation is a matter of official record and will be brought to the attention of the Subcommittee on Irrigation and Reclamation, the comments of the Bureau of Reclamation on his statement are requested promptly.

While no definite date has been set for consideration of the Burns Creek authorization bill, it is possible that it may come before the subcommittee on Wednesday, June 12. Therefore, the comments of the Bureau of Reclamation on Mr. Hunter's presentation are desired by that time.

Sincerely,

GOODRICH W. LINEWEAVER,
Committee Assistant.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington D. C., June 13, 1957.

Mr. GOODRICH W. LINEWEAVER,
Committee Assistant, Committee on Interior and Insular Affairs,
United States Senate, Washington D. C.

DEAR MR. LINEWEAVER: By letter dated June 4, you transmitted a letter by Mr. E. A. Hunter, administrative assistant, Utah Power & Light Co., together with payout schedule, maps, and charts. That information was prepared by Mr. Hunter as part of his testimony and supporting information to be included in the record of the hearings held on May 22 regarding S. 145 and S. 2089 on the Palisades reregulating reservoir (Burns Creek). Mr. Hunter's information has been reviewed, and the Bureau of Reclamation comments on it, which you requested, are covered in the paragraphs below.

The Bureau plan for the Burns Creek reregulating structure and Palisades Dam is one of complete electrical, financial, and hydraulic integration, a common practice, while Mr. Hunter's table is based upon a coordinated operation plan without recognition of financial integration. The payout analysis of Burns Creek presented by Mr. Hunter, in which it is stated that it would take 106 years to retire the capital investment with interest at 2½ percent, is mathematically correct to the extent that it represents a payout analysis based upon differences in net revenues and net investment for the overall project with and without Burns Creek. To extract selected financial data and other related information from an integrated study and then use that information to analyze an independent project destroys the integration concept. The complete interrelationship between the Burns Creek reregulating structure and Palisades installation makes it necessary to consider them on an integrated basis. Burns Creek is a reregulating structure and is made possible only because the parent structure is in existence.

If Burns Creek could be operated as an independent unit, the average revenue required to pay out in 50 years would be 37 percent higher than the average annual revenue used by the Utah Power & Light Co. in its analysis. Rates to return this higher revenue still would be competitive with the present Utah Light & Power Co. rates in the area. For the Government to set the higher rate, however, would create an intolerably awkward position where the Federal Government would be selling power in the same area at one rate for Palisades and another for Burns Creek.

Under the integrated proposal, the power rates used in the Bureau's study are adequate to repay the combined Palisades and Burns Creek power allocation at 1957 price levels in 44 years with 3 percent interest and to repay all costs assigned

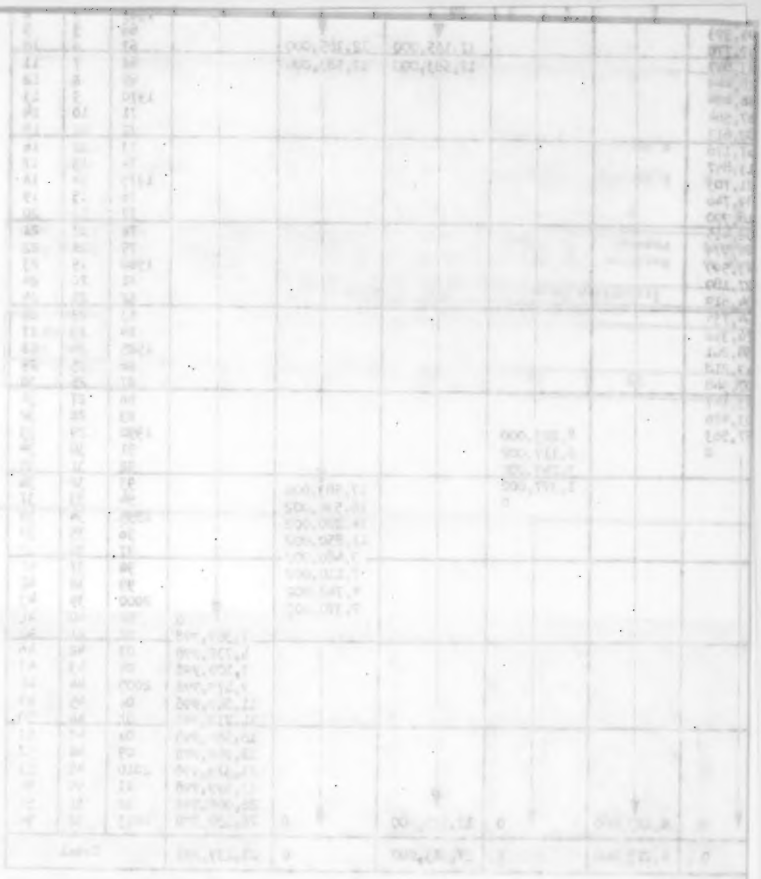


TABLE 9 COMBINED PALISADES AND BURNS CREEK POWER SYSTEM

PALISADES PROJECT

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Year of Study				Operating Revenue Deductions						Interest Bearing Alloc. Palisades			
Palisades	Burns Creek	Fiscal Year	Total Operating Revenue	Purchased Power	Trans. Service	All Other El.Oper. & Maint. Exp.	Prov. for Repl.	Total Columns 5-8	Net Rev. Columns 4-9	Interest 3%	Principal	In Service End of Yr.	Balance to Be Repaid
			$	$	$	$	$	$	$	$	$	$	
0	Prior	to 1958	477,000	0	38,000	107,000	45,000	190,000	287,000	0	287,000	10,765,000	10,4
1		1958	1,563,000	35,000	116,000	180,000	173,000	504,000	1,059,000	314,340	744,660	13,966,000	12,9
2		59	1,776,000		191,000		181,000	587,000	1,189,000	388,030	800,970		12,1
3		1960	1,795,000		209,000	180,000	181,000	605,000	1,190,000	364,001	825,999		11,3
4	0	61	2,064,000	35,000	338,000	261,000	258,000	892,000	1,772,000	339,221	853,779		10,4
5	1	62	1,530,000	23,000	459,000	342,000	336,000	1,160,000	2,370,000	313,608	886,392		9,5
6	2	63								287,016	912,984		8,6
7	3	64								259,626	940,374		7,7
8	4	1965								231,415	968,585		6,7
9	5	66								202,358	997,642		5,7
10	6	67								172,428	1,027,572		4,7
11	7	68								141,601	1,058,399		3,6
12	8	69								109,849	1,090,151		2,5
13	9	1970								77,145	1,122,855		1,4
14	10	71								43,459	1,156,541		2
15	11	72								8,763	292,097		
16	12	73								0	0		
17	13	74											
18	14	1975											
19	15	76											
20	16	77											
21	17	78											
22	18	79											
23	19	1980											
24	20	81											
25	21	82											
26	22	83											
27	23	84											
28	24	1985											
29	25	86											
30	26	87											
31	27	88											
32	28	89											
33	29	1990											
34	30	91											
35	31	92											
36	32	93											
37	33	94											
38	34	1995											
39	35	96											
40	36	97											
41	37	98											
42	38	99											
43	39	2000											
44	40	01											
45	41	02											
46	42	03											
47	43	04											
48	44	2005											
49	45	06											
50	46	07											
51	47	08											
52	48	09											
53	49	2010											
54	50	11											
55	51	12											
56	52	2013	3,530,000	23,000	459,000	343,000	336,000	1,161,000	2,369,000	0	0	13,966,000	
Total			191,835,000	1,336,000	24,760,000	18,692,000	18,310,000	63,098,000	128,737,000	3,252,860	13,966,000	13,966,000	

NOTES:

Col. 4 Operating Revenue:

	Sales Mill.KWH Per Year	Rate Mills/ KWH	Annual Revenue
Firm	275,000	4.7	$1,292,500
Non-federal Pumping (includes sales to Minidoka power system)	191,200	4.5	860,400
Federal Project Use	130,900	3.0	392,700
Seasonal Non-firm	136,800	3.0	410,400
Dump	267,100	2.0	534,200
Total	1,021,000		$3,530,200
		Rounded	($3,530,000)

Col. 5 Average Purchases:

Energy	$ 8,000
Peak	15,000
Total	$23,000

Col. 6 Wheeling charges paid by project up to 1.0 mill per kilowatt-hour when loads not served directly from project facilities:

Palisades	$232,000
Burns Creek	227,000
Total	$459,000

Col. 7 Costs estimated on the basis of the Bureau's experience in operating projects of similar characteristics:

Palisades	$180,000
Burns Creek*	162,000
Total	$342,000

* Irrigation allocation of $3,000 included as paid by purchasers of irrigation power.

Col. 8 Provision for replacement estimated on a 3 percent, 50-year sinking fund basis for Palisades and 2-1/2 percent on Burns Creek:

Palisades	$181,000
Burns Creek	155,000
Total	$336,000

Cols. 13, 17, 19, and 21 Palisades allocations and cost assigned to be returned from power revenues based on the Act of September 30, 1950, Public Law 864, 81st Congress, also includes Burns Creek allocations and cost:

Costs	Palisades	Burns Creek	Total
Dam & Reservoir	$42,680,000	$12,529,000	$ 55,209,000
Powerplant	14,859,000	24,278,000	39,137,000
Switchyard	1,857,000	1,061,000	2,918,000
Goshen Transmission	2,365,000	1,806,000	4,171,000
Communication	40,000	26,000	66,000
Camp	606,000	567,000	1,173,000
Fish & Wildlife and Recreation	593,000	43,000	636,000
Total Constr. Cost	$63,000,000	$40,310,000	$103,310,000
Int. During Constr.	1,105,000	1,831,000	2,936,000
Total	$64,105,000	$42,141,000	$106,246,000

SYSTEM AVERAGE RATE AND REPAYMENT STUDY

JECT

14	15	16	17	18	19	20	21	22	23	24	25	26
Investment Repayment from Power Revenues											Year of Study	
Allocation to Commercial Electric Plant					Interest Free Allocation							
	Burns Creek				Irrigation Power		Aid to Irrigation					
Balance to be Repaid	Interest 2-1/2%	Principal	In Service End of Yr.	Balance to be Repaid	Required Payment	Balance to be Repaid	Required Aid	Balance to be Repaid	Earned Surplus Cumulative	Fiscal Year	Burns Creek	Palisades
$	$	$	$	$	$	$	$	$	$			
10,478,000	0	0	0	0	6,359,000	6,359,000	0	0	0	Prior to 1958	0	0
12,938,380					8,223,000	8,223,000	9,290,000	9,290,000		1958		1
12,133,370										59		2
11,307,371										1960		3
10,453,992	0	579,000	38,448,000	37,869,000						61	0	4
9,567,200	945,725	221,275		37,645,725			12,165,000	12,165,000		62	1	5
8,654,216	941,143	228,857		37,416,868						63	2	6
7,713,892	935,422	240,578		37,182,290						64	3	7
6,745,257	929,547	240,443		36,941,847						1965	4	8
5,747,615	923,546	246,454		36,695,393						66	5	9
4,720,083	917,385	252,615		36,442,778			12,165,000	12,165,000		67	6	10
3,661,644	911,069	258,931		36,183,847			17,583,000	17,583,000		68	7	11
2,571,493	904,596	265,404		35,918,443						69	8	12
1,448,638	897,961	272,039		35,646,404						1970	9	13
292,097	891,160	278,840		35,367,564						71	10	14
0	884,183	1,184,951		34,182,613						72	11	15
	876,565	1,515,435		32,667,175						73	12	16
	870,079	1,553,321		31,113,857						74	13	17
	777,846	1,592,154		29,521,703						1975	14	18
	738,043	1,631,957		27,879,746						76	15	19
	697,244	1,672,756		26,210,990						77	16	20
	655,425	1,714,575		24,502,415						78	17	21
	612,560	1,757,440		22,744,975						79	18	22
	568,624	1,801,376		20,943,599						1980	19	23
	523,590	1,846,410		19,097,189						81	20	24
	477,430	1,892,570		17,204,619						82	21	25
	430,115	1,939,885		15,264,734						83	22	26
	381,618	1,988,382		13,276,352						84	23	27
	331,709	2,038,091		11,238,261						1985	24	28
	280,957	2,089,043		9,149,218						86	25	29
	228,730	2,141,270		7,007,948						87	26	30
	175,199	2,194,801		4,813,147						88	27	31
	120,329	2,249,671		2,563,476						89	28	32
	64,087	2,305,913		257,563		8,223,000				1990	29	33
	6,439	257,563		0		6,117,002				91	30	34
	0	0				1,747,000				92	31	35
						1,377,002		17,583,000		93	32	36
						0		16,530,002		94	33	37
								14,220,002		1995	34	38
								11,850,002		96	35	39
								9,480,002		97	36	40
								7,110,002		98	37	41
								4,740,002		99	38	42
								2,370,002		2000	39	43
									0	01	40	44
									2,369,998	02	41	45
									4,739,998	03	42	46
									7,109,998	04	43	47
									9,479,998	2005	44	48
									11,849,998	06	45	49
									14,219,998	07	46	50
									16,589,998	08	47	51
									18,959,998	09	48	52
									21,329,998	2010	49	53
									23,699,998	11	50	54
									26,069,998	12	51	55
0	0	0	38,448,000	0	8,223,000	0	17,583,000	0	28,439,998	2013	52	56
0	18,824,142	38,448,000	38,448,000	0	8,223,000	0	17,583,000	0	28,439,998	Total		

	Cost Allocation		
	Palisades	Burns Creek	Total
Non-reimbursable:			
Flood Control	$22,733,000	$ 0	$ 22,733,000
Fish & Wildlife and Recreation	593,000	43,000	636,000
Total Nonreimbursable	$23,326,000	$ 43,000	$ 23,369,000
Reimbursable:			
Irrigation	$18,590,000	$ 3,650,000	$ 22,240,000
Commercial Elect. Plant	12,861,000	36,617,000	49,478,000
Irrigation Elect. Plant	8,223,000	0	8,223,000
Subtotal Reimbursable	$39,674,000	$40,267,000	$ 79,941,000
Int. during Constr.	1,105,000	1,831,000	2,936,000
Total Reimbursable	$40,779,000	$42,098,000	$ 82,877,000
Total	$64,105,000	$42,141,000	$106,246,000

	Cost Allocation		
	Palisades	Burns Creek	Total
Repayment			
Irrigation			
Irrigators	$ 9,300,000	$ 775,000	$10,075,000
Aid from Commercial Power	9,290,000	2,875,000	12,165,000
Subtotal	$18,590,000	$3,650,000	$22,240,000
Irrigation assistance from commercial power revenues given to Michaud Flats Project and Michaud Div. of the Ft. Hall Indian Reservation (Public Law 781, 83d Congress, 2d Session)			5,418,000
Total			$27,658,000

Total aid to irrigation by commercial power Col. 21: $17,583,000

Commercial Electric Power:	Palisades (Col. 13)	Burns Creek (Col. 17)
Allocation	$12,861,000	$36,617,000
Interest during Constr.	1,105,000	1,831,000
Total	$13,966,000	$38,448,000

Irrigation Electric Power Col. 19:

Allocation $8,223,000

45	41	02							
46	42	03							
47	43	04							
48	44	2005							
49	45	06							
50	46	07							
51	47	08							
52	48	09							
53	49	2010							
54	50	11							
55	51	12							
56	52	2013	3,530,000	23,000	459,000	343,000	336,000	1,161,000	
Total			131,835,000	1,336,000	24,760,000	18,692,000	18,310,000	63,098,000	

NOTE:

Col. 4 Operating Revenue:

	Sales Mill. KWH Per Year	Rate Mills/ KWH	Annual Revenue
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Peak	15,000
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Total	$459,000

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Palisades	$180,000
Burns Creek*	162,000
Total	$342,000

* Irrigation allocation of $3,000 excluded as paid by purchasers of irrigation power.

Col. 8 Provision sizing f Creek:

Cols. 13, 17, 19, to be ret September cludes Bu

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Dam & Rese Powerplant Switchyard Goshen Tra Communicat Camp Fish & Wil Recreatic Total Co Int. Dur Total

to power in 53 years. For your ready information there is attached a copy of the payout table included in the Bureau's report on Burns Creek. This payout is based upon January 1956 construction prices and use of 2½ percent interest to amortize costs of Burns Creek allocated to commercial power. It shows payout of combined power costs in 36 years and payout of all project costs assigned to be repaid from power in 45 years. Adjusting this analysis to take into account construction costs at January 1957 levels and a 3 percent interest rate for amortization of Burns Creek power costs results in the 44- and 53-year periods given above.

Sincerely yours,

W. A. DEXHEIMER, *Commissioner.*

STAFF MEMORANDUM ON UTAH POWER & LIGHT CO. MATERIAL

There have been reviewed copies of a letter and attachments dated May 29, 1957, relating to the Burns Creek project, S. 145 and S. 2089, from E. A. Hunter, administrative assistant, Utah Power & Light Co. Mr. Hunter's letter and attachments related to and elaborated on his testimony on the 2 bills of the Idaho Senators on May 22, 1957.

The Hunter material raises serious questions as to the financial feasibility of the Burns Creek project, assuming that the premises on which he based his discussion should be correct. This observation relates particularly to the payout period for the power allocations on Burns Creek alone, which he found to be 106 years with 2½ percent interest.

Mr. Hunter did not include in his analysis consideration of the proposed integrated electric, financial, and hydraulic operation of the Burns Creek project with Palisades Dam and powerplant, already in operation. Standing alone, Burns Creek would not be feasible under existing Palisades power rates, as Mr. Hunter's analysis shows.

Calculating power revenue on the basis of rates competitive with those of the Utah Power & Light Co. in the general area would show payout of Burns Creek even as an independent unit. Such independent payout in 50 years would require rates 37 percent higher than prevailing Bureau of Reclamation average rates. A dual rate structure for Government power in a closely knit area is avoided by the financial integration of Burns Creek with Palisades. Under this integration, according to the Bureau testimony, payout of the power costs of the combined project, plus 3 percent interest, will be accomplished in 44 years. Total costs of the combined project, including the noninterest bearing (irrigation) costs assigned for payment from power revenues, would be accomplished by the combined project in 53 years. This favorable payout results from the substantial increase in the amount of firm power that can be generated when Burns Creek is available to reregulate releases to meet irrigation and fish requirements.

On receipt of Mr. Hunter's letter, a request was addressed to the Bureau of Reclamation for comment on Mr. Hunter's statement. Attached hereto is the reply of Commissioner Dexheimer, dated June 13, 1957. To Mr. Dexheimer's reply is attached a complete payout schedule for the Palisades-Burns Creek power system.

The Commissioner states that taking construction costs at January 1957 levels, with 3 percent interest rate for amortization, Burns Creek power costs would be paid out in 44-year and 53-year periods, as an integral part of the Palisades-Burns Creek system. The 44-year period would discharge all interest-bearing costs allocated to power, with 3 percent interest. The 53-year period would be required to repay all costs assigned to power (including the non-interest-bearing aid to irrigation).

This memorandum and attached material including comments on repayment analysis are submitted for the information of the Subcommittee on Irrigation and Reclamation, and the sponsors of the Burns Creek authorization bills with copies to other members of the Committee on Interior and Insular Affairs.

(Whereupon the committee proceeded with other business.)

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